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Relational Foodways in Wild Rose Country:

The Pathways, Pitfalls, and Politics of Regenerative Farming in an Agro-Industrial Complex

by

Chelsea Leann Rozanski

A THESIS

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Relational Foodways in Wild Rose Country

The Pathways, Pitfalls, and Politics of Regenerative Farming in an Agro-Industrial Complex

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Department of Anthropology and Archaeology
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Abstract

A global shift towards large-scale mechanized agriculture has led to a reconfiguration in socio-economic patterns of food production, circulation, and consumption. This intensive agro-industrial regime is characterized by a corporatization and concentration of land, the commodification of seeds and water, and a heavy reliance on external inputs. Driven by a residual model of extractive development, the capitalist exploitation of natural resources has manifested cycles of debt and dependency among small-scale growers worldwide. In Canada, where the agrarian landscape is dominated by export-oriented conventional methods, small-scale farmers are being squeezed out by industry consolidation, high operating costs, and consumer limitations. Situated in Wild Rose Country (Treaty 7, Southern Alberta), this research analyzes 1) the political, socio-economic, gendered, ecological, and cultural-spiritual factors impacting farmers' ability to employ regenerative practices, and 2) the role of *relationality* in enabling or disabling more socially and ecologically resilient foodways. A holistic methodology consisting of experiential farming, farm exchanges, group sharing circles, and storytelling supported an environmental scan of regenerative farming organizations in Southern Alberta. Insights were further gleaned from relevant academic literature, policy and NGO reports, and popular media. Guided by agrarian political economy and feminist political ecology, the analytical framework developed herein–relational foodways–makes theoretical and practical contributions to the fields of Critical Agrarian Studies, Socio-cultural Anthropology, and Development Studies. Namely, enhanced food resilience, environmental sustainability, social inclusion, regenerative applications, and educational value. From the formation of a farmer-owned growers cooperative to an urban activist growers collective, the process and outcomes of this transdisciplinary research brings together diverse voices seeking food system transformation.

Situating Myself and Offering Gratitude: Where Wild Roses Grow

Upon setting out to seek knowledge, it is important to situate oneself within their work, as "a researcher's background and position will affect what they choose to investigate, the angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions" (Malterud, 2001, p. 483-484). Anishinaabekwe scholar from Flying Post First Nation, Minogiizhigokwe (Dr. Kathleen E. Absolon), and Cree scholar Cam Willet emphasize that "if you want to do ethical research that accurately represents who it is for and who it represents, then you have to be positioned in it and connected to it" (Absolon, 2005, p. 104).

Born to a family of Irish, German, Polish, and Italian ancestry, my youth was shaped by the farmsteads and coastal shores of Delaware, a place long stewarded by the Lenni-Lenape, Nanticoke, and Assateague Peoples. I am forever grateful to my parents, Cindy and Ed, who encouraged my passion for agrarian anthropology as I set out to learn how to milk cows in Kenya, shear sheep in Scotland, harvest tangerines in China, and ferment cacao in Panamá. These community-based experiences are etched in my approach to engaged research and activism, where I utilize the privileges and platforms I have been afforded to support the expressed needs of my counterparts. Since my arrival to Wild Rose Country (Alberta, Canada) in 2019, I have slowly integrated into the region's agrarian network while pursuing graduate studies. During my first year, I fostered a deeper understanding of the challenges faced by food-insecure populations while serving as the Executive Director of a not-for-profit peri-urban farm. In this role, I became familiar with the needs of local food access programs, the emerging efforts for food rescue, and the social desire for more inclusive community growing spaces. The

following summer, while apprenticing with an urban farming business, I gained insight into the economic and logistical challenges for local growers and consumers.

At this point in time, I was invited by two immigrant elders,[1] Sara Rodriguez Huenchullan and Oscar Jara, to contribute my agricultural and research skills to a community-based initiative seeking geostructural reconfiguration. Specifically, they aspired to transform urban yards into polyculture gardens as a tool to mobilize neighbourhood-level (re)Commoning, and to strengthen partnerships between urban and rural farmers. From this collaboration grew others. My process-based, experiential research led me to support a volunteer-run food redistribution group founded on the principles of dignified food justice; to co-found a permaculture social enterprise guided by Métis Ways of Knowing; to learn the ropes of turkey throwing, yak tagging, lambing, and cattle grazing; and to become a founding member farmer of a growers cooperative.

Throughout these experiences, I have reflexively navigated my positionality as an activist-scholar,[2] an applied anthropologist, and a member of many of the communities in which I conduct research. At times, I felt awkward pulling out my folder of consent forms or recording conversations to later scribe with more accuracy. Generally, my counterparts would reassure and encourage my research; once we began talking or engaging in a hands-on activity, the anxieties dissipated. Other times, I felt an ethical contradiction conducting funded research–with the trimmings of publications, presentations, and prestige–among individuals who are struggling financially or socially. Although I have co-authored, co-presented, and obtained grants for my

[1] In this case, elders is intentionally lowercase. Following the *International Journal of Indigenous Health*'s Defining Aboriginal Peoples Within Canada, "Elder is capitalized to indicate honour or title, used when describing Indigenous cultural and spiritual leaders. The lowercase elder should be used when generally referring to an Indigenous person who is a senior. Therefore, not all older Indigenous persons can be Elders, and some Elders can be relatively young" (p. 3). https://journals.uvic.ca/journalinfo/ijih/IJIHDefiningIndigenousPeoplesWithinCanada.pdf

[2] For more on scholar-activism or activist scholarship, see Calhoun (2008), Duncan et al. (2021), Hale (2008), Levkoe et al. (2020), Mendez (2008), Piven (2010), and Reynolds et al. (2018).

counterparts, a deeper dissatisfaction with society's structural inequalities spiralled into depression, self-harm, and suicidal ideation. I believe it is important to be transparent about the personal challenges one may face during research, so that spaces and connections for healing can be normalized. Opaskwayak Cree knowledge seeker, Dr. Shawn Wilson (2008), reminds us how "research is ceremony"; if the process does not change you as a person, you are not doing it right. Over the past five and a half years, I have undoubtedly changed into the anthropologist and educator I am today. A great deal of my personal growth is attributed to my research counterparts, Sara and Oscar, who embraced me during the darkest times of graduate school. Their genuine friendship and love enabled me to persevere in my studies and to continue advocating for a better world.

I am also grateful for my agrarian mentors–Richmond Godfrey, Michael Gavin, Sarah and Marcus Riedner, Kolby Peterson, the Winter family, Dani Chappell, Jerremie and Rita Clyde, Rod Olson, Maryann Borch, among others–who welcome me to their farms and lives. Also dear to my heart and personal growth are Gertrude Korkor Samar, Karla Oliveira, Shantel Tallow, and Albertine (Penny) Red Gun. Although this thesis is my original, independent work as its author, my basket of knowledge was woven alongside these community members. The stories presented were gathered with an approved Ethics Certificate (REB20-1681), issued by the University of Calgary Conjoint Faculties Research Ethics Board on March 11, 2022. In my Introduction, I provide a Statement of Contributions for those chapters in which I include co-authored publications. I acknowledge that the only voice I can represent is my own and take responsibility for any misrepresentations made in my dissertation.

In addition to the wisdom of my collaborators and the literary works of hundreds of authors, the theories-practices[3] put forth in this dissertation were grown in relation with the lands, waterways, and ecological communities of Wild Rose Country. This region of Turtle Island is the ancestral territory of the Niitsitapi,[4] who make up the Siksika, Piikani, and Kainai First Nations of the Blackfoot Confederacy; the Tsuut'ina First Nation; the Ìyethka (Stoney) Nakoda, including the Chiniki, Bearspaw, and Goodstoney First Nations; and the Métis Nation of Alberta, Districts 5 and 6. Inuit and other Indigenous Peoples,[5] immigrants, refugees, and visitors from around the world also live, create, and play among the Rocky Mountains, aspen parklands, and prairies of Treaty 7.

Furthermore, I express my appreciation for the University of Calgary's Department of Anthropology and Archaeology, my supervisor Dr. Ben McKay, supervisory committee members Dr. Pallavi Banerjee and Dr. Caesar Apentiik, candidacy examination committee members Dr. Marit Rosol and Dr. Matt Walls, and defense examination committee members Dr. Lauren Kepkiewicz and Dr. Annette Desmarais. Through its generous funding, the Government of Canada's Doctoral Vanier Graduate Scholarship, in partnership with the Social Sciences and Humanities Research Council, made it possible to gather and share my research. This work was also supported by an Alberta International Graduate Excellence Scholarship, a Faculty of Graduate Studies (FGS) Master's Scholarship, two FGS Transformative Talent Internship Scholarships, a Calgary Institute for the Humanities (CIH) Frances Spratt Graduate Student Resident Scholarship, and a P.E.O. International Women's Scholarship. I recognize my

[3] 'Theories-practices' is joined by a hyphen to challenge the false dichotomy of the two. Thinking is doing and doing is thinking. Its plurality represents the multitude of theories and practices scholars engage in at any one time, thus rejecting a fixed or static nature. For more, see (Mignolo & Walsh, 2018).

[4] To learn more about Niitsitapi ways of knowing, being, doing, and connecting, see the following Blackfoot-led online learning platforms: https://www.glenbow.org/blackfoot/ ; http://blackfootcrossing.ca/index.html ; https://galileo.org/kainai/

[5] Dr. Linda Tuhiwai Smith (2021) argues that 'Indigenous Peoples' is a relatively recent, problematic term, but is useful for addressing shared experiences of colonization.

colleagues in the CIH Food Studies Interdisciplinary Research Group, Graduate Leaders Circle, Taylor Institute for Teaching and Learning Teaching Academy, and Graduate Anthropology and Archaeology Students Association, who have supported my professional growth. I am especially grateful to Dr. Noreen Humble for her unwavering support throughout my graduate program.

To my husband, Lachlan, who opened my eyes and guided my feet to live in relation with all that is around us. You are my rock and muse for ruminations on anthropological theories, methods, and ethics. Your patience, humour, and commitment to celebratory sushi dinners kept me going with realistic optimism. To our baby bear, Bernhardt, you are our seedling for whom we work to grow a more regenerative future. To my ancestors and parents, thank you for all that you have sacrificed for me to be here, flourishing. My patrilineal surname, Rozanski, means *one who tends and lives where wild roses grow*. Living and working in a place abundant with wild roses, I am reminded of my roots and the responsibilities I have to my relationships with others and the land. Through my doctoral research and beyond, I hope to regenerate more relational foodways for generations to come.

Dedication

To the Wild Roses, past, present, and future.

Table of Contents

Abstract **2**
Situating Myself and Offering Gratitude: Where Wild Roses Grow **1**
Dedication **5**
Table of Contents **6**
List of Tables **9**
List of Figures and Graphics **9**
List of Abbreviations **10**
Epigraph **12**
Part I: Coming to Know the Land **13**
Introduction **14**
Landscapes of Canadian Agriculture 14
Research Design and Dissertation Pathway 25
Statement of Contributions 29
Grounding Place-Thought Through Story: Weavings of a Knowledge Basket 31
Chapter 1: Preparing the Soil **38**
Power and Politics in Global Agrarian Regimes 38
Agrarian Political Economy 40
Feminist Political Ecology 42
Political Implications of the Agro-Industrial Regime 44
Socio-economic Implications: Consolidation and Individualization 50
Gendered Implications: Patriarchy and the Feminization of Agriculture 62
Ecological Implications: A Changing Climate and the Human/Nature Dichotomy 65
Cultural-Spiritual Implications: Disconnection & Sacridity 75
Chapter 2: Germinating the Seeds **80**
Power and Politics of Grassroots Mobilization 80
Global Movements and Food Sovereignty 82
Local Movements and Alternative Food Networks 92
Challenges for Grassroots Mobilization 98
Residual Approaches 99
Food Access and Security 99
Food Resilience and Rescue 104
Intersectional Approaches 109
Food Justice, Right to Food and Food Democracy 109
The Role of Pluriactivity 111
Relational Foodways 115
Political and Analytical Utility 123

Chapter 3: Planting Collectively **126**
Power Dynamics and Collaboration 126
Community Mentors 130
Cycles of Collaboration 133
Ethical Considerations 134
Implications of a Pandemic 135
Methodology 136
Experiential Farming 139
Farm Exchanges 144
Sharing Circles 149
Storytelling 153
Learning Walks 158
Part II: Tending the Plants **160**
Chapter 4: Growing for Social Agencies with a Not-for-Profit Farm **162**
Fieldnotes of a Reflexive Practitioner 165
Food for Thought 169
Chapter 5: Growing for the Alternative Food Network with an Urban Farm **174**
Urban Ag Through the Seasons: Vignette by Michael Gavin 176
A Day in the Field for an Ethnographic Agrarian Researcher 179
Data and Observations 182
Benefits and Barriers of Urban Farming with The Land 184
Chapter 6: Growing for the Commons with an Activist Collective **190**
Prefigurative Politics of Critical Urban Gardening 191
Vignette by Sara Rodriguez Huenchullan 193
A Case Study of Urban Farming for the Commons 194
Getting Organized 194
Outcomes and Discussion of 'reCommoning' 200
Limitations and Contradictions 202
Concluding Thoughts 205
Chapter 7: Growing for Meaningful Connections with Rural Producers **207**
Happiness by the Acre 209
Regenera Ranch 219
Sheep Shearing and Lambing Vignette 222
Winter's Turkeys Farm 227
Growing for Meaningful Connections 232
Among Producers 236
Among Organizations and Institutions 238
Among Consumers 239

Among the Broader Community 242
Part III: Harvesting the Yields 247
Chapter 8: Findings 248
Pathways, Pitfalls & Politics for Food System Transformation 248
Political Relations 250
A Network of Food Resilience and Seed Saving 256
Socio-economic Relations 261
The Division of the Fruits of Labour 264
Degrowth & Decommodification 268
Gendered Relations 273
Intergenerational Relationships 279
Ecological Relations 283
Ethnoecological Awareness 289
Cultural-Spiritual Relations 294
Intercultural Understanding 298
Chapter 9: Discussion of Findings 301
Cooperation and Community Organizing 301
Food System Transformation 309
Forms of Resistance and Renewal 314
Relationships with Community and Resources 315
Relationships with Policy & Praxis 321
Food Studies Scholarship 329
Conclusion: Putting the Farm to Bed 334
Contributions to Scholarship & Society 336
Implications 340
Limitations 344
Recommendations for Further Research 347
Final Reflection: Cycles of Growth 350
References 356
Appendices 424
Appendix A: 2020-21 Internship Letters 424
Appendix B: Letter of Support from Key Counterparts 426
Appendix C: Research and Program Timeline 428
Appendix D: Protocol for Experiential Research 429
Appendix E: Monthly Experiential Research Activities 430
Appendix F: Storytelling Guide 432
Appendix G: Knowledge Dissemination 434

List of Tables

Table 1	Alberta's Agricultural Landscape	52
Table 2	Research Sites & Relational Foodways Characteristics	137
Table 3	Experiential Research Observations	139
Table 4	Storytelling Guiding Themes & Topics	155
Table 5	Crops Grown by Root & Regenerate Urban Farms	183
Table 6	Example of Crop Data by Root & Regenerate Urban Farms	184
Table 7	Research Network of Seeds & Cuttings	201
Table 8	Ethical Farming Practices at HBTA	213
Table 9	Key Regenerative Practices & Observations at HBTA	216
Table 10	Political Relations Across Field Sites	255
Table 11	Socio-economic Relations Across Field Sites	265
Table 12	Gendered Relations Across Field Sites	278
Table 13	Ecological Relations Across Field Sites	287
Table 14	Cultural-Spiritual Relations Across Field Sites	297
Table 15	Scholarly & Societal Benefits of Research	336

List of Figures and Graphics

Figure Set 1	Willow basket; wild raspberry leaves	32
Figure Set 2	Hide tanning; rose hips	35
Figure Set 3	Seed saving; foraging mushrooms	36
Figure Set 4	Community Guides	131
Figure Set 5	Farm Tours in the City & the Countryside	149
Figure Set 6	Sharing Circles at Sara & Oscar's house in GFL	151
Figure Set 7	Growing in lasagna beds	165
Figure Set 8	Applying irrigation techniques	166
Figure Set 9	Seed bank; station checks	168
Figure Set 10	Cultivating on an apartment rooftop & an urban business space	175
Figure Set 11	SPIN farming in household front & backyards	177
Figure Set 12	Distributing produce at a farmers market & for CSA members	178
Figure Set 13	Harvesting spinach & drying radishes for a YYCGD bulk order	180
Figure Set 14	Growing in between buildings downtown	188
Figure Set 15	Co-designing an urban garden	195
Figure Set 16	Gathering seeds & recycled cardboard for the garden	196
Figure Set 17	Turning a lawn into a community growing space, before & after	197
Figure Set 18	Gathering as an Activist Collective	198
Figure Set 19	Small-scale mixed farming at HBTA	210
Figure Set 20	Duck eggs & Kunekune pigs at HBTA	215
Figure Set 21	West Quarter Farms' land-sharing market garden	218

Figure Set 22 Leasing pasture in De Winton; daybreak at Regenera Ranch 220
Figure Set 23 Pasture & the Rosebud River at Regenera Ranch 221
Figure Set 24 Shearing Sheep with Regenera Ranch 223
Figure Set 25 Tending the new lambs & kids 224
Figure Set 26 Loading toms & hens with Winter's Turkeys Farm 228
Figure Set 27 Tagging Yaks with Little Loaves Farm 236
Figure Set 28 Gifting feathers from drakes & wool from sheep 244
Figure Set 29 Flowering plants in the market garden at HBTA 258
Figure Set 30 Shantel Tallow cooking from her Aahksoyo'p Nootski Cookbook 299
Figure Set 31 Haskap berries; Artemisia ludoviciana 351
Figure Set 32 Mountain View Growers market table; Research Mentor, Sara 354
Graphic 1 Conceptual Framework of Relational Foodways 27
Graphic 2 Food Studies Symposium Graphics 339

List of Abbreviations

Agriculture, Forestry, and Other Land Use (AFOLU)
Agrarian Political Economy (APE)
Agrarians Foundation (AF)
Agreement on Agriculture (AoA)
Alternative Food Initiative (AFI)
Alternative Food Network (AFN)
Canadian Organic Growers (COG)
Community-Based Participatory Research (CBPR)
Community Supported Agriculture (CSA)
Critical Agrarian Studies (CAS)
Dairy Farmers of Canada (DFC)
Ecological Farmers Association of Ontario (EFAO)
El Niño Southern Oscillation (ENSO)
Experiential Learning (EXL)
Federal Task Force on Agriculture (FTFOA)
Feminist Political Ecology (FPE)
Food Secure Canada (FSC)
Free Trade Agreements (FTAs)
Genetically Modified Organisms (GMOs)
Geographic Information System (GIS)
Greater Forest Lawn (GFL)
Happiness by the Acre (HBTA)
Indigenous Food Systems Network (IFSN)
Information and Communication Technology (ICT)
International Monetary Fund (IMF)

International Panel of Experts on Sustainable Food Systems (IPES)
La Vía Campesina (LVC)
Land Equivalent Ratio (LER)
Manitoba Organic Alliance (MOA)
Movimento dos Trabalhadores Rurais Sem Terra (MST)
National Farmers Union (NFU)
Okanagan National Alliance (ONA)
On-Farm Slaughter Operation (OFSO)
Organic Matter (OM)
Pacific Decadal Oscillation (PDO)
People's Food Commission (PFC)
Provincial Networking Organizations (PNO)
Root and Regenerate Urban Farms (RRUF)
Rural Roots to Climate Solutions (RR2CS)
Seasonal Agricultural Worker Program (SAWP)
Small-Plot Intensive Farming (SPIN)
Structural Adjustment Programs (SAPs)
Sustainable Agriculture Strategy (SAS)
Sustainable Development Goals (SDGs)
Temporary Foreign Workers (TFW)
TRIPS Agreement (Trade Related Intellectual Property Rights Agreement)
United Nations Conference on Trade and Development (UNCTAD)
United Nations Food and Agriculture Organization (UNFAO)
United Nations Statistical Division (UNSD)
Universal Basic Income (UBI)
Women, Food and Agriculture Network (WFAN)
Working Group on Indigenous Food Sovereignty (WGIFS)
World Integrated Trade Solution (WITS)
World Trade Organization (WTO)
Young Agrarians (YA)
Young Agrarian Apprenticeship (YAA)
YYC Growers and Distributors (YYCGD)

Epigraph

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.

Margaret Mead, (Keys, 1982)

PART I

Coming to know the land

Introduction

Landscapes of Canadian Agriculture

The agricultural landscape in Canada is diverse, reflecting the country's vast geography, climate, and cultural heritage. For millennia, many First Nation communities of Turtle Island have cultivated crops using sustainable practices such as crop rotations and species diversity maintenance (Dickason, 1997). Among the Ohswekenhró:non (people of Six Nations of the Grand River, also known as Haudenosaunee or Iroquois), an agricultural tradition inextricably tied to their spirituality is the intercropping of corn, beans, and squash, or *Áhsen Nikontate'kèn:'a* (translating to Three Sisters in Mohawk) (de Souza et al., 2021). In the Great Lakes region, companion planting and seed selection was also customary among the Wendat, Chonnonton, and Tionantati nations–to name a few–who grew and traded sunchokes, strawberries, sunflowers, and tobacco for generations (Decaire, 2012; Heidenreich, 2024). Despite the ongoing impacts of settler colonialism, practices that care for soil and plant health continue to be enacted by Indigenous growers advocating for food sovereignty (Coté, 2016; LaDuke, 2005; Morrison, 2011).

In the 16th and 17th centuries, French settlers migrating to what is now Eastern Canada brought with them seeds and their own techniques for farming wheat, flax, hops, hemp, vegetables, and livestock (Dick & Taylor, 2007). Over the next two centuries, Maritime agriculture was a political tool for French and British military and mercantile interests. From financial incentives and training societies to commercial-use land titles, government support enabled marshland farming to spread inland and become more intensive. Land was turned to pasture and hay for cattle ranching and tilled for cereal production; factory cheese and creamery butter increased alongside seed potatoes and the export of apples (Dick & Taylor, 2007). While

some farmers maintained a diversified self-sufficient production, the demands of the mid-nineteenth century capitalist economy led to specialization, a trend persistent across the Canadian agricultural landscape today.

Further West, early missionaries, fur traders, and gold rush miners grew minimal crops and livestock to supplement the wild game and fruit they exchanged with First Nations (Dick & Taylor, 2007). Agricultural expansion on the Prairies was in the political and economic interest of the Confederation, and made possible by financial investments, railway development, and the Dominion Lands Act of 1872. Concurrently, treaty making between the British Crown and First Nations resulted in the establishment of reserve lands and a constitutional recognition of Indigenous Peoples' rights for self-governance. The latter, however, has not been upheld by the State as evidenced by the extermination of bison herds, the Pass System, and residential schools (Asch, 2014; Barron, 1988; Mainville, 2001). With European settlement came a colonial ideological stratification of race, class, gender, and "development."[6] Growth-oriented economic models were employed to justify the forced relocation and attempted assimilation of Plains Peoples, including the Blackfoot, Cree, Saulteaux (Ojibwe), Nakota Sioux, among other kin (Beingessner, 2013).

In the decades that followed, approximately 80 million hectares across the Northern Great Plains–in what is now southern Manitoba, Saskatchewan, and Alberta– were claimed by the Canadian government, sectioned into 160-acres, and issued to some 1.25 million homesteaders (Yarhi & Regehr, 2023). Agricultural land tenure for settler family farms[7] was based on private property rights, with males as the primary public decision-makers and

[6] Development is placed in quotations to challenge the colonial assumptions made within its definitions: to expand by a process of growth; the act or state of being developed.
[7] For a more detailed historical account and literature on settlement in the Canadian Prairies, see Friesen (2017); for a Canadian Agriculture History Timeline, see: https://www.farms.com/reflections-on-farm-and-food-history/history-of-canadian-agriculture

title-owners. To receive title to the land, the Department of the Interior mandated that settlers reside on and cultivate a large portion of their free quarter-section (Martin, 1938). According to expert rangeland ecologists, an estimated 50 million ha of natural grassland were converted into cropland, primarily for wheat (Bailey et al., 2010). Grazing leases were harder to come by, granted only if the land was considered "unfit" for agricultural purposes (Martin, 1938). Nevertheless, by the early 1900s, homesteaders were managing over 360,000 cattle across southern Saskatchewan and Alberta (Anderson, 1988).

The grasslands of the Northern Great Plains, which evolved over 50 millions of years along with the climate and grazing animals, are essential ecosystems that absorb, store, and release carbon. In the span of 50 years, 80% of the settled grasslands deteriorated from the mechanization of the wheat economy, poor soil management, and overgrazing; this was worsened by twelve years of drought (Bailey et al., 2010; Council of Canadian Academies [CCA], 2022; Wang et al., 2014). During this period, farmland tenure in the Prairie Provinces was also in transition with the Natural Resources Transfer Acts of 1930, shifting the jurisdiction of Crown (public) lands and natural resources from the federal government to the three Provinces. Still, the Canadian Government continued to play a crucial role in shaping Western agriculture. From 1935 to 2009, the Prairie Farm Rehabilitation Administration (PFRA) helped farmers overcome issues with soil erosion, lack of water, and pasture management by building on-farm dugouts, implementing strip farming, and planting shelterbelts (Gilson, 2006). However, when the PFRA was subsumed into Agriculture and Agri-Food Canada's Agri-Environment Services Branch, the responsibility for managing these projects was moved to the community level.

In the same timeframe, the federal government established the Canadian Wheat Board (CWB), a public institution that played a central role in marketing Western Canada's grain. Operating as a "single-desk" seller to ensure price stability and equitable returns for farmers (Veeman, 1998), the CWB operated in the collective interest of all wheat and barley farmers, particularly smaller producers who benefited from its pooling system and government-backed price guarantees. The dismantling of the CWB in 2012 marked a significant shift in Canada's grain marketing system (Veeman & Veeman, 2006), leading to increased market competition but also raising concerns about reduced bargaining power for individual farmers. Industry privatization was also reflected in the transition from a farmer-centered seed system, supported by publicly-funded experimental research farms, to lab-based breeding that capitalized on intellectual property (Kuyek, 2007).

Today, four firms–Syngenta Group, Bayer, BASF, and Corteva–control half of the world's commercial seeds and 62% of the global pesticide market; four companies control 44% of the farm machinery market, and three multinational companies provide the breeding stock for almost 100% of the commercial poultry genetics (Erosion, Technology, and Concentration [ETC] Group, 2022). Technological advancements of the "Green Revolution" also spurred significant growth in large-scale commercial feedlots and packing plants for Canadian beef cattle. Three slaughterhouses in Alberta, owned by two multinationals, Cargill Inc. and JBS S.A., now account for approximately 85% of the country's beef supply (Edmiston, 2020). Beef cattle and grain production remain central to Albertan agriculture, alongside oilseed, dairy cows, pigs, and chickens (St. Pierre & McComb, 2023). While many Canadian farms are still family-owned, dotting a patchwork of private quarters and sections, farmland is increasingly being consolidated and purchased by developers or financial investors.

Over the past century, the total number of Canadian farms has decreased by 73% (711,090 to 189,874 individual farms), while the average farmland area[8] has increased from 198 acres (0.80 km^2) to 809 acres (3.27 km^2) (Statistics Canada, 2022c). Since 2001, the number of farms larger than 3,500 acres has nearly doubled and the national per-acre price of farmland has quadrupled (Dyck, 2024). Simultaneously, the total population of farm operators[9] and farming families has declined; while one in three Canadians lived on a farm in 1931, less than 2% of the total population now run farming operations (Statistics Canada, 2022c). The male-dominated industry is also characterized by an aging population, with 56 being the average age of farm operators (Statistics Canada, 2022a). In Alberta, approximately 9% of farm operators are under 35, while 62% are aged 55 and over. With farm debt more than doubling in the last 20 years, a small percentage (12%) of farms reporting a succession plan, and urban sprawl on the rise (Statistics Canada, 2022a), it begs the question: what is the future of farming in Canada?

These trends have influenced and been influenced by a global shift towards intensive mechanized agriculture, which is driven by an extractive-led development model based upon the exploitation of natural resources and export of primary materials (McKay, 2020). The contemporary agro-industrial regime is characterized by a reliance on genetically-modified monoculture crops, a corporatization and concentration of land, and the expansion into new frontiers vis-à-vis land- and water-grabbing strategies (Borras et al., 2012). Large-scale land acquisitions[10] have contributed to a reconfiguration in patterns of food production, circulation, and consumption (Clapp, 2018; Friedmann, 2009), which in turn, has led to what David Harvey (2004) coins agrarian "accumulation by dispossession." Socio-economically and politically, the

[8] Farm area is considered land owned or operated by an agricultural operation and includes cropland, summerfallow, improved and unimproved pasture, woodlands and wetlands, idle land, and land on which farm buildings are located.
[9] In the 2021 Census of Agriculture, there were a reported 262,455 total farm operators (Statistics Canada, 2022a).
[10] Considered the buying and selling of large pieces of land by domestic and transnational stakeholders.

residual, market-based agendas of extractivism heighten land-based peoples' vulnerability and widen the gap of who is able to participate in processes of gathering, growing, and eating foods. Compounded by forms of exclusion in vertical and horizontal value-chains,[11] industrialized production not only erodes ecosystem and community well-being (Horrigan et al., 2002), but manifests cycles of debt and dependency among small-scale, sustainable, and regenerative growers worldwide.

What defines "small-scale farming" or smallholders is flexible and relative to moderate or large-scale producers. The typology groups used by Statistics Canada (2019) for farm size is based on gross farm revenues, with small farms making between CAD $10,000 and $99,999, medium farms raking in $100,000 to $249,999, large farms generating between $250,000 and $499,999, and very large farms earning $590,000 or more. In the most recent Census of Agriculture, 51.5% of Canada's total farm operating[12] revenues came from only 4.1% of farms (Dyck, 2024), mirroring the relative profitability of large-scale operators and non-family corporations (Chen & Clark, 2023). Boasting the highest farm operating revenues in the country, Alberta has the second largest total farm area at 49.2 million acres (19.9 million ha); more than a quarter of Canada's field crop area; and an average farm size of 1,184 acres (479 ha) (Alberta Agriculture and Irrigation, 2022; St. Pierre & McComb, 2023). In this dissertation, small-scale refers to rural and urban producers who manage livestock or crops on a limited scale (up to a section- 640 acres or 259 ha); contribute to local food production and distribution; operate with

[11] The range of goods and services necessary for an agricultural product to move from the farm to the financial consumer.

[12] Farm operators are considered any person responsible for the management decisions in operating a farm. Other operating arrangements include family corporations, sole proprietorship, partnership, cooperative, and forms of renting (renting or leasing from others, leasing from governments, or crop-sharing from others). In Canada, there are also land trusts, agricultural conservation easements, community farms, incubator farms, and social enterprises (Penrice et al., 2021).

relatively limited resources and deep farmer involvement; employ diverse land use; and promote sustainability.

Sustainable agriculture is an adaptive and dynamic approach that "meets the needs of existing and future generations, while also ensuring profitability, environmental health, and social and economic equity" (UN Environment Programme [UNEP], 2021). While it is not a prescribed package, sustainable farming models take into account seasonal availability of resources, ecological carrying capacities, and degrees of mechanization to preserve soil fertility and protect biodiversity (Moraine et al., 2017; Wezel et al., 2016). The study of ecological processes applied to agricultural production systems–known as agroecology–goes beyond productivist terms to embody a political social movement that challenges power structures within society (Laforge et al., 2020; Nyéléni, 2015; Wezel et al., 2009). Agroecological practices encompass a diversity of complementary techniques to increase water percolation and retention, rebuild soil structure, recycle nutrients and energy, reduce carbon emissions and atmospheric carbon dioxide (CO2) levels, and minimize the use of agro-chemical and energy-intensive inputs (Altieri et al., 2015). Relative to the agro-industrial regime, agroecological farming has been shown to cultivate food in a more culturally appropriate, productive [in terms of total output per unit area], and socially inclusive way (International Panel of Experts on Sustainable Food Systems [IPES]-Food Panel, 2018; McKay, 2012; McKay, Nehring, & Catacora-Vargas, 2024).

Alongside his colleagues, Colin Ray Anderson (2019) of The Centre for Agroecology, Water and Resilience at Coventry University maintains the necessity of six domains for agroecological transformations: access to natural ecosystems; knowledge and culture; systems of exchange; networks; discourse; and gender and equity. With the convergence[13] of heightened climate change, lingering supply-chain disruptions from the COVID-19 pandemic, two major

[13]For more on "converging crises" literature see George (2010) and Foster (2013).

wars, and a world food price crisis, critical agrarians are being called to "question and reshape the very category of agrarian, toward a more just and sustainable future" (Carlisle, 2014, p. 2). Within a structural reconfiguration of food systems, Priscilla Claeys, Annette Aurélie Desmarais, and Jasber Singh (2021) assert the necessity of "political anti-capitalist praxis that actively fosters radical inclusivity" (p. 12). Lauren Kepkiewicz and Bryan Dale (2019) answer this call by challenging the system of private property to transition to more communal relations of land ownership. Dr. Charlotte Coté (2016), member of the Tseshaht First Nation, calls for a "peaceful revolution" that brings together Indigenous and non-Indigenous kin to protect lands and waterways while supporting Indigenous communities seeking food sovereignty. Advocating for rights-based food systems, Molly Anderson (2008) cautions that "sustainability per se is an empty goal for food system reform, unless *what* will be sustained and *for whom* are specified" (p. 593).

Canadian farmers have increasingly integrated sustainable practices through the support of a Federal Sustainable Agriculture Strategy (SAS), Sustainable Canadian Agriculture Partnership, and Resilient Agricultural Landscape Program (Skogstad, 2023). For instance, in the 2021 Census of Agriculture, 11.9% of farms reported at least one form of renewable energy production (Statistics Canada, 2022a), and in Alberta, 66% of cropland was prepared using no-till seeding, a method that mitigates excessive soil erosion and reduces greenhouse gas (GHG) emissions (Government of Alberta, 2023). As Canada strives to reduce fertilizer emissions by 30% by 2030 and reach net-zero GHG emissions by 2050,[14] all sectors of the agri-food industry are being mandated to generate targets to reduce their carbon footprint and/or offset their emissions (Agriculture and Agri-food Canada, 2022). For instance, Dairy Farmers of Canada (DFC) developed a Farmer Sustainability Advisory Group and an Environment module

[14] The Canadian Net-Zero Emissions Accountability Act came into law June 29, 2021.

of the mandatory program, proAction, to innovate manure management practices, optimize transportation efficiencies, implement precision agriculture technologies, and reduce water usage (DFC, 2024; Food and Agriculture Organization [FAO] and Global Dairy Platform, 2019).

Nevertheless, scholars and grassroots organizations highlight growing concerns about the co-optation of 'sustainable agriculture' as agri-businesses adopt and market the language (i.e., net-zero, climate-smart agriculture, ecological intensification, organic, nature-based solutions, and zero-deforestation) without fully committing to their principles (Alonso-Fradejas et al., 2020; Bragg et al., 2021). Forms of greenwashing[15] prioritize profit over genuine environmental and social benefits, reaffirming a focus on increased production, exports, and competitiveness in the global market. Living in what some call a "Fourth Industrial Revolution" marked by new technologies (e.g., gene editing, advanced robotics, artificial intelligence, and geoengineering), the landscape of "Agriculture 4.0" is being propelled by carbon farming, green finance, and bioeconomies (GRAIN, 2022). Another term that has been repackaged by corporations (e.g., ADM, General Mills[16], Cargill, Danone, and Nestlé), to serve the industrial food system is 'regenerative.'

In a scoping literature review of regenerative agriculture, Peter Newton (2020) and colleagues from the University of Colorado, Boulder, gleaned a common understanding among scholars and practitioners: a conservation and rehabilitation approach to food systems that seeks to improve soil health, increase biodiversity, sequester carbon, integrate livestock, and increase community well-being. Another review out of Wageningen University in the Netherlands (Schreefel et al., 2020) found that the most consistent principles of regenerative agriculture are to

[15] Fortunately, Bill C-59, Canada's *Fall Economic Statement Implementation Act, 2023*, became law on June 20, 2024. This legislation amends the Canadian *Competition Act* to include new provisions regarding claims and conduct pertaining to "greenwashing."

[16] See: General Mills committing US$2.3 million to advance regenerative agriculture in Manitoba and Saskatchewan oat fields - RealAgriculture

enhance soil organic matter and fertility, optimize resource management, alleviate climate change, and improve water quality and availability. A combination of sustainable agricultural techniques may include minimal tillage, multi-species cover cropping, crop rotation, polycultures and intercropping, intensive rotational grazing, integrated pest management, no synthetic pesticides, reduced waste, crop residue retention, and composting (Giller et al., 2021; Teague et al., 2016). Additional research expands on these approaches by examining their regional adaptability and long-term ecological impacts (LaCanne & Lundgren, 2018; Sands et al., 2023). For instance, Claire LaCanne and Jonathan Lundgren (2018) found that regenerative practices in the U.S. Midwest not only enhance biodiversity but also lead to higher profitability and resilience among farmers.

In their article, "Moving towards an anti-colonial definition for regenerative agriculture," Bryony Sands and colleagues (2023) critique current definitions of regenerative agriculture for overlooking the Indigenous origins of its practices[17]. The authors argue that many techniques now labeled as regenerative have been employed by Indigenous communities for centuries. They contend that Western academic frameworks often reduce regenerative agriculture to lists of practices, principles, and outcomes, neglecting the relational values integral to Indigenous knowledge systems. To address this epistemic injustice, the authors propose an anti-colonial definition that incorporates diverse knowledge systems, including Indigenous ecophilosophies, and emphasizes sociocultural and relational values.

In the Canadian context, where approximately 174 farms[18] identify as regenerative, scholars have increasingly examined how regenerative agriculture aligns with sustainable food

[17] Many of these techniques are grounded in Indigenous Ways of Knowing. Mares and Peña (2012) and others critique the White-washing of "alternatives" such as regenerative, permaculture, aquaculture, agroforestry, holistic management, rewilding, biodynamic, etc. (Caradonna & Apffel-Marglin, 2018; Massicotte & Kelly-Bisson, 2019; Slocum, 2006; Som Castellano, 2016), proposing "alterNatives" to the agro-industrial complex.
[18] Non-profit organization, Régénération Canada, offers a digital map: https://regenerationcanada.org/en/map/.

policy and climate adaptation strategies (Obregón et al., 2023). In the Prairie Provinces, Jarislowsky & BMO Research Chair in Regenerative Agriculture, Kate Congreves, is a pioneer in research on the role of nitrogen cycling and the diversification of cropping systems in regenerative agriculture. In a recent interview with *Ag-West Bio* (Oyedele, 2024), Congreves defines regenerative agriculture as "an ecosystem-based approach to raising food; one that embodies reciprocity with the land to support ecological health and minimize negative anthropogenic impacts." Additionally, Indigenous scholars and practitioners highlight the importance of traditional ecological knowledge in reshaping regenerative food systems, emphasizing land-based practices that support biodiversity, food sovereignty, and reconciliation (Antonio et al., 2025; Robin, 2019).

Despite the promise of regenerative agriculture, scholars have critically engaged with its theoretical and empirical foundations. In addition to its pervasive spaces of privilege, regenerative agriculture has been critiqued for its lack of cohesive definition (Fassler, 2021), lack of robust evidence to support the claims for holistic grazing (Nordborg, 2016), and true potential for carbon sequestration on agricultural lands (Ranganathan et al., 2020; Stewart et al., 2007). While identifying nine contributing discourses to regenerative agriculture—including Restoration for Profit; Big Picture Holism; Regenerative Organic; Regrarian Permaculture; Regenerative Cultures; Deep Holism; First Nations; Agroecology and Food Sovereignty; and Subtle Energies—Ethan Gordon, Federico Davila, and Chris Riedy (2023) of Australia's Institute for Sustainable Futures uncover four tensions. These include 1) the differentiation of core genealogies and associated interpretations of holism; 2) the extent of engagement with issues of equity and power in the food system; 3) varying definitions based on process, outcomes, both or neither; and 4) departure from or connection to industrial and productivist approaches.

Some scholars and non-profit organizations argue avoiding the term when describing agroecological practices (GRAIN, 2022); others encourage a "reflective engagement" with the mechanisms and dynamics of regeneration, particularly from an agronomic perspective (Giller et al., 2021). Recent research findings from 1,671 regenerative farmers in New Zealand (Grelet et al., 2021) suggest a shift in agronomic-centered discourse to include the role of social well-being vis-à-vis highly democratic, mutually-supportive, and value-generated food systems. Similarly, Liz Carlisle and colleagues (2019) emphasize the intersection of regenerative agriculture and social justice, advocating for participatory frameworks that prioritize the needs and voices of prioritizing the Indigenous, Black, Latinx, immigrant, and migrant agrarians.

While critically addressing the limitations of regenerative farming, this research offers insights into its political and social utility for agrarian transformation, particularly within a "relational foodways" approach. By integrating perspectives from agronomy, ecology, and rural sociology, scholars are increasingly calling for a transdisciplinary understanding of regenerative agriculture that accounts for its ecological, social, and economic dimensions (Rosset & Altieri, 2017; Pimbert, 2018). This broader framing not only highlights the potential of regenerative practices in fostering sustainable food systems but also underscores the importance of addressing systemic inequities and power dynamics within contemporary agricultural transformations.

Research Design and Dissertation Pathway

In my dissertation, I highlight the pathways and pitfalls of regenerative agrarian alliances seeking food system transformation in Wild Rose Country (Southern Alberta, Canada). During a preliminary season of fieldwork, the questions, objectives, methods, and hopeful outcomes of this research were designed in collaboration with community counterparts and fellow farmers.

Our central research questions ask: 1) How do regenerative farmers in Wild Rose Country understand and practice relational foodways? 2) What political, socio-economic, gendered, ecological, and cultural-spiritual factors are impacting farmers' ability to employ regenerative practices? Further questions include: 3) Under what conditions do relational foodways thrive? and 4) What enables or disables relational foodways to support food resilience and intercultural understanding?

To ground my dissertation, I have offered gratitude to the people and spirit of this work, situated myself within my research, come to know the land in which I grow the ideas put forth, and presented my threads of inquiry. In *Chapter 1: Preparing the Soil*, I use an intersectional analysis of agrarian political economy (APE) (Fairbairn et al., 2014; Schneider & McMichael, 2010) and feminist political ecology (FPE) (Elmhirst, 2011; Rocheleau, 1997, 2008) to weed through academic literature on power and politics in global agrarian regimes. With a hori hori knife in hand, I pull out the roots of the multi-faceted implications of the agro-industrial complex. To decompact the soil of this work with minimal disturbance, I pound in my broadfork to glean further insights from policy and NGO reports, popular media, and an environmental scan of regenerative farming in the region. *Chapter 2: Germinating the Seed* sheds light on the power and politics of grassroots mobilization, including global movements and food sovereignty, local movements and alternative food networks, and the challenges faced by both. After analyzing residual and intersectional approaches to food system transformation–including food access and security models, food resilience and rescue initiatives, and food justice, right to food, and food democracy discourse (Alkon & Agyeman, 2011; Desmarais, 2020; Levkoe et al., 2020; Nyéléni, 2007; Wittman et al., 2010), I germinate the seeds of my analytical framework: relational foodways (Graphic 1).

POLITICAL RELATIONS
Equitable representation and governance for food systems.
Access to Resources
Advocates for fair access to land and waterways.
Indigenous Knowledges
Incorporates traditional ecological knowledge into modern food practices.
Democratic Governance
Promotes community involvement in decision-making processes.
Seed Sovereignty
Ensures communities control their seeds and agricultural practices.
ECOLOGICAL RELATIONS
Importance of ecological balance in food production.
Natural Cycles
Encourages knowledge and respect for ecological processes.
Interconnectivity
Understands the reciprocal relationships among humans, animals, and plants.
Ecosystem Health
Recognizes the importance of biodiversity in food sustainability.
Land Stewardship
Promotes responsible management of land and water resources.
CULTURAL - SPIRITUAL RELATIONS
Honors the spiritual connection to land, nature, and food.
Sacred Relationships
Views the land and food as living entities deserving respect and care.
Community Well-being
Promotes collective health through diverse food practices and knowledge.
Cultural Celebrations
Encourages community gatherings that honor food and culture.
Intercultural Dialogue
Promotes knowledge sharing across cultures and generations.
SOCIO-ECONOMIC RELATIONS
Economic viability of sustainable food procurement and distribution.
Economic Diversity
Embraces diverse economic models in food production and distribution.
Local Circular Economies
Strengthens local economies through supportive food networks and systems.
Cooperative Practices
Supports communal efforts in food production and distribution.
Beyond Agriculture
Encourages various methods of sustenance beyond farming.
GENDERED RELATIONS
Gender equity in food production and consumption.
Empowerment
Encourages women's participation in decision-making in food systems.
Knowledge Exchange
Fosters intergenerational knowledge about food and community practices.
Cultural Gender Norms
Acknowledges diverse cultural norms and roles related to food.
RELATIONAL FOODWAYS

Graphic 1: Conceptual Framework of Relational Foodways

With the soil prepared and seeds germinated, *Chapter 3: Planting Collectively* explores the relationship between power, ethics, and collaboration. After presenting my community mentors, or key counterparts, and the cyclical nature of this collaborative research, I discuss the strengths, limitations, and reasonings for my chosen methodologies: experiential farming, farm exchanges, sharing circles, and storytelling. Methods were carried out alongside 50 participants,

who self-identified as small-scale regenerative growers. In *Part II: Tending the Plants,* the methods used during the 2020-2024 growing seasons are brought to life through four case studies, or rhizomal nodes. While integrating vignette narratives, *Chapters 4-7* story our collective research experiences growing for social agencies with a not-for-profit farm; growing for the alternative food network with an urban farm; growing for the Commons with an activist collective; and growing for meaningful connections with rural producers.

Once planted, seedlings that are mindfully tended can burgeon into mature plants that fruit and are harvested. In *Part III: Harvesting the Yields, Chapters 8-9* glean the outcomes of all four rhizomal nodes through a discussion of food resilience and seed saving, degrowth and decommodification, intergenerational relationships, ethnoecological awareness, intercultural understanding, cooperation and community organizing, and forms of resistance and renewal for food system transformation. Finally, the *Conclusion: Putting the Farm to Bed* synthesizes the opportunities and challenges of relational foodways, offers the scholarly and societal benefits of this research, acknowledges the study's limitations, posits recommendations for further research, and looks toward the future through a reflective cycle of growth.

Oriented as "agrarianism-from-below" (Carlisle, 2014), this collaborative effort makes theoretical and practical contributions to the fields of Critical Agrarian Studies, Socio-cultural Anthropology, and Development Studies. Through reflexive engagements with decoloniality and intersectionality, my research has cultivated spaces and experiences among small-scale growers to enhance food resilience, environmental sustainability, social inclusion, regenerative applications, and educational value. In promoting alternatives to the global agrarian regime, this work offers insights into the politics of regeneration, particularly in the context of Canada's contemporary agrarian transformation. My hope is that you, the reader, accept my offering of this

humble basket of knowledge. I am grateful for your critical engagement and welcome your unique perspective.

Statement of Contributions

The first section of *Chapter 4: Tending the Plants*–Growing for Social Agencies with a Not-for-Profit Farm–draws upon three works that I published under my former surname, Klinke. These include a sole-authored chapter for a manual with the UCalgary Taylor Institute for Teaching and Learning (Klinke, 2021), a co-authored commentary with the *Journal of Agriculture, Food Systems, and Community Development* (JAFSCD) (Klinke & Samar, 2021a), and a co-authored research paper with the *Canadian Food Studies Journal* (Klinke & Samar, 2021b). Both journal articles touch on the emerging field of Food Studies and were co-authored with Gertrude Korkor Samar. While calling for a paradigm shift within educational systems, we asked, how can community-based experiential engagement in post-secondary food pedagogy enhance student learning, bridge academic-public divides, and foster transformative social change? Drawing from our experiences farming in Calgary's periphery, we argued that activist food studies employed with a learner-centered, place-based teaching approach can support local food networks and build community within and beyond academia. During the writing process, we met once a week to exchange ideas and revisions. As the First Author for both articles, I wrote the majority of each publication (i.e., introductions, body paragraphs, conclusions), while Samar wrote the literature reviews and provided editorial assistance.

The subsequent section in Chapter 4–Growing for the Alternative Food Network with an Urban Farm–includes a reflective essay that was originally published with JAFSCD (Rozanski & Gavin, 2023). In this Special Issue, my co-author, Michael Gavin of Root and Regenerate Urban Farms, and I highlighted the viability of agricultural techniques that are in relation *with the land*

to grow more socially and ecologically sustainable food and farm systems. We did so by recounting our apprenticeship-mentorship with the Young Agrarians over the 2021 growing season (see Appendix A for 2020-21 Internship Letters), where we asked, how and to what extent can urban farmers employ land-based regenerative practices to grow food for a local Alternative Food Network (AFN)? How can experiential learning (EXL) partnerships between graduate student researchers, farmers, and agricultural organizations support more socially and ecologically sustainable food and farm systems in Southern Alberta? As the First Author, I wrote the majority of the article, while Gavin wrote his first-person vignette and provided the empirical data for plots of land, harvested yields, and means of distribution. I have received explicit permission from both Samar and Gavin to include our co-authored papers in my thesis. Unless otherwise indicated, all photos were taken by me. All graphic illustrations are attributed to Canva Open Access, vasmila @liudmyla-vasylieva.

Finally, I published the following section, Grounding Place-Thought Through Story, as a sole author in the *McGill Graduate Journal of Anthropology-Collective Research in Anthropology* (Rozanski, 2023). Mississauga Nishnaabeg author, Dr. Leanne Betasamosake Simpson (2014), encourages writers to start with a story or poem. For Otipemisiw Métis Canada Research Chair, Dr. Jennifer Adese (2014), sharing your own story is an act of reciprocity. Storytelling, as a methodology rooted in Indigenous Ways of Knowing, is also a way to decolonize approaches to knowledge-seeking (Braun et al., 2014; Wilson, 2008). As reality is rooted to local spaces and environments (Caxaj, 2015), my intention of starting with a story is to ground the spatially and temporally unbounded threads of power and knowledge-making in place-thought (Watts, 2013). Using dialogue, the metaphor of a willow basket, and italicized teachings from my grandmothers and literary mentors, I provide a sensorial critique of global

agrarian regimes while navigating issues of displacement, privilege, Othering, and collaborative knowledge production.

Grounding Place-Thought Through Story: Weavings of a Knowledge Basket

Under the waning moon of a charcoal sky, my partner, Lachlan, and I trudge through knee-deep snow to the barn loft. “Pass the goat and chicken pens, then turn right after the cob farmhouse. If you’ve reached the veggie patch, you’ve gone too far,” guides Maryann, tender of Good Note Community Farm. Lachlan first met Maryann at the annual Frostbite Bushcraft Symposium; I came to know her years later through the Young Agrarians. We find a seat by the woodstove and settle in, steaming cup of mint tea in hand. *There is warmth in a circle*, whisper my grandmothers. Picked the previous summer by the river’s edge, I thank the leaves for their calming effect on my queasy growing womb. Generations of wild mint, rose hips, bison, and saskatoons have stewarded Turtle Island for thousands of years alongside their First Nation, Inuit, and Métis kin (Absolon & Willet, 2004). *All my relations*.

Red, orange, green, yellow, and brown willow rods harvested two days ago lay at our feet. *Ask permission before taking, Abide by the answer*, guides Dr. Robin Wall Kimmerer (2013, p. 183), member of the Citizen Potawatomi Nation. Part of a longer “Honorable Harvest,” she goes on: *Take only what you need*, *Never waste what you have taken, Share*. Still moist from the snow, they bend over, under, over, under. Exchanging stories and laughter, we weave our melon baskets (Figure Set 1) with tales of farming on the prairies. “These past two years of drought have been hard on the animals, plants, and soils. Hopefully there will be a good snowpack this March,” reflects a farmer. From the trimmings, I craft willow stars to give as Yuletide gifts, so as to not waste what we harvested. With the rising sun, Lachlan and I make our way from *Amiskwaciy-wâskahikan* back to *Moh’kinstsis*, the Blackfoot place-name for the confluence of

the Bow and Elbow Rivers. Flowing from the Rocky Mountain glaciers in the West to the prairies in the East, I have learned many names for these waters. To the Ìyethka Nakoda, they are called *Wincheesh-pah*; *Kootsisáw* to the Tsuut'ina Denè, and *Otos-kwunee* to the Nehiyawak or Cree First Nations.

Figure Set 1: Willow basket (*left*); wild raspberry leaves (*right*)

Dr. Cutcha Risling Baldy (2014) of the Hoopa Valley Tribe calls on people to *(Re)name places, plants, and processes in their Indigenous given names.* At this meeting point, the currents and ecology tell me stories of the past. Plants and animals mirror the nuances of human movement and exchange, invasion, and naturalization. Wild raspberry (Figure Set 1) and Canada violets flourish beside dandelions and plantain. Domesticated Honey Bees buzz past Mourning Cloak butterflies in their quest for pollen. Patches of Timothy-grass and Blue Grama thirst upon groundwater from a dynamic ecosystem below inhabited by mycelium, Wood Ants, and

European Ground Beetles. *Form an ethical space of engagement* (Ermine, 2007) while *Walking parallel paths in a good way* (Indigenous Strategy, 2019). Looking out the car window on the QE2, I visualize summer wheat, barley, and canola fields blanketing the snow-covered landscape. My own ruminations of *Sections, Quarters, Property, Displacement* unfurl with every grain elevator we pass. 1830, the Indian Removal Act south of the Medicine Line where I was born and raised. 1872, the Dominion Lands Act. 1877, the signing of Treaty 7. 1885, The Reserve Pass System. 1889, the Peasant Farming Policy. Century-long Indian Residential Schools. A quote from Ron Goode, Tribal Leader of the North Fork Mono Tribe, and historical ecologist Jared Dahl Aldern comes to mind. The lands and waters themselves are "primary historical sources that narrate settler colonial and Indigenous history and the physical and cultural changes that colonialism has wrought" (2014, p. 39). Echoed by Dr. Leanne Betasamosake Simpson (2014), *The land must once again become the pedagogy. Learn on and from the Land*.

Feeling the weight of my willow basket on my lap, I think about my European ancestors who immigrated to North America in the 1800s. *Seven Generations Ago*. Maria Rosa Altopildi. Did they foster reciprocal relationships with the cornhusk basket weavers of the Lenape Peoples? Possibly, but highly unlikely. Members of the Delaware Nation were pushed further and further from Lenapehoking, their ancestral and spiritual homelands in the Delaware Valley, eventually leaving their footprints on the Trail of Tears alongside over 60,000 members of the Cherokee, Muscogee (Creek), Seminole, Chickasaw, and Choctaw Nations (Jahoda, 1975). With the arrival of Europeans to Turtle Island two centuries prior, long-held foodways of the Lenape, Anishinaabe, Mohawk, Plains Cree, and hundreds of First Nation communities were forcibly disrupted by a Western ideology of agrarian and societal "development."

To exercise social and political hegemony, the necessities of life—soil, water, seeds, and animals—became increasingly commodified and controlled by those in positions of power; land became "scaled and modified in terms of progress and advancement," (Watts, 2013, p. 26). Such shifts in global agrarian regimes were, and continue to be, entangled in dominant knowledge systems where capital is the central mechanism of dominance, power, exploitation, accumulation, and conflict (Friedmann, 2009). Historian Sarah Carter (1990) speaks to these processes of colonial settlement, imposed treaties and reserves, and assimilation tactics that still penetrate communities through intergenerational trauma and socio-economic inequalities. Despite these hardships, approaches to challenging the hegemony have always been regenerating through soils, waters, mountains, and community networks.

After several hours on the road, we arrive home and awaken the fireplace with a chunk of smoky muskeg peat. Cocooned in the sheep hide we processed last fall (Figure Set 2), the mingling scents of lanolin and partially decayed matter kindle ancestral anecdotes. Lachlan, who learned from Iitstsaansski (Sings in the Trees) Winston Wadsworth Jr., instructs: *Flesh, soak, stretch on a wooden rack, sun dry, dry scrape, brain or yoke, and smoke.* Before her passing, my Grandmother Rosalie would tell tales of beam scraping hides, weaving willow baskets to cradle duck eggs and foraged mushrooms, and drying rose hips for tea (Figure Set 2). She would bring freshly baked bread to her neighbour, who, in return, filled her basket with jars of sauerkraut made from summer cabbages. Together, they would harvest wild raspberries for jam, the leaves gathered with red clover for women's Moon. *Never take the first, Never take the last, Never take more than half* (Kimmerer, 2013). Feeling the warmth of the flames on our cheeks, we recount the farm's summer bounty. Unraveling into the paths: yellow and green squash, zucchini, and cucumbers. Safely hidden from flea beetles beneath row cover: broccoli, cauliflower, kale, green

and purple cabbages. One acre of bright blue haskap berries to freeze and make into pies, tarts, and smoothies deep in the winter months. From our beans, tomatoes, onions, carrots, parsnips, beets, potatoes, and garlic we were nourished and saved seeds.

Figure Set 2: Hide tanning (*left*); rose hips (*right*)

Each year, we build up our seed bank of assorted wheats, barleys, and oats; flowering cosmos, nigella, sunflowers, borage, nasturtiums, calendula, buckwheat, and flax; and medicinal plants tobacco, catnip, valerian, mint, and oregano, to name a few. *If they're heritage, heirloom, open pollinated, you name it… Save some for a rainy day, Share some with others, Sow the rest,* Grandmother Rosalie hums. My hand reaches for the air-drying beans (Figure Set 3). Fingers swirling in their cool textures and distinct colours, I greet each variety by name like I would a friend. "Hello Amish Nuttle, Appaloosa, Jacob's Cattle, and Jesse Fisk," I whisper, "are you ready for summer, Magpie, Molasses Face, Nicaraguan Black Turtle, Swedish Brown, and

Tiger's Eye? Oh, Lachlan, please don't forget to pack seeds, some root crops, and a dozen eggs for Penny Red Gun. We are meeting her at Blackfoot Crossing in Siksika tomorrow!"

Figure Set 3: Seed saving (*left*); foraging mushrooms (*right*)

The crackles of the hearth spark another reminder. "Lach, do you remember at what time bird loading starts next Thursday? 7 PM?" He nods, half asleep from today's drive. Each October and December, Lachlan and I lend a hand catching and throwing toms and hens onto transport trucks for Winter's Turkeys Farm. The fall months also bring yak tagging with Little Loaves Farm and spent layer culling at Happiness by the Acre. At the beginning of March, we assist Richmond with shearing his sheep, and return a few weeks later to lamb with the ewes. Grandmother Rosalie sings softly in my ear: *Reciprocate*. After shearing, Rosalie taught me to pack a willow basket with wool to gift to magpies for their spring newborns and to mice for a headstart on winter nests. When we harvest beef in September, we use all the organs and render

tallow for soap-making. It's also a tasty treat for the ravens!

For us, the cycles of the year guide our work on the land. *Live in accordance with the seasons, Respect the life cycles of those in the natural world* (Adese, 2014, p. 54). Whether we are planting saplings or harvesting poplar buds for balm, putting chickens on pasture or foraging Morchella mushrooms (Figure Set 3), each experience is woven into a basket of knowledge that we carry with us. As we move through life with our baskets, it is critical to be aware of what is picked up and placed in our vessels, as well as what seeps in through processes of enculturation. We should continuously evaluate its structural integrity, replacing whips that have deteriorated after generations of colonial, patriarchal, and neoliberal capitalist pressures. It is also important to be mindful of where and how we use our baskets, rather, to question our motivations for and modes of knowledge dissemination.

Set your intentions, Reflect on the emotions felt (Kallio & Houtbeckers, 2020). While re-searching (Absolon, 2011) what it means to be an anthropologist or a farmer, a Treaty person or a storyteller, how can our baskets be tools to challenge unequal systems of power and representation? The ways in which we come to be, do, and connect are guided by our knowledge systems, which are reflected in language, stories, temporal and spatial understandings, governance, and power. If you will, our literal and metaphorical baskets hold these knowledges and stories. Thus, systems of domination are also woven in the politics of knowledge-making, shaped by asymmetrical power relations intersecting race, sex, and class–among other intersectional locators–as well as by the dichotomization of humans and Nature (Crenshaw & Schulz, 2016; Cronon, 1996). In Chapter 1, I unravel the fibres of one such basket–colonialism–and its whips–patriarchy and capitalism–which have retained an increasingly inequitable food system.

Chapter 1: Preparing the Soil

Power and Politics in Global Agrarian Regimes

The concept of power has long been a focal point of scholarly inquiry, encompassing various theoretical frameworks that elucidate its multifaceted nature. Traditionally, power has been perceived as a possession wielded by the elite over subaltern groups. Karl Marx's nineteenth century argument on power is fundamentally rooted in the material conditions of society, emphasizing the exploitative relationship between the bourgeoisie and proletariat within a capitalist framework (Marx, 1867). Marx posits that power is intrinsically linked to economic structures, where class struggle serves as the engine for historical change. This perspective underscores an inherent conflict, suggesting that true emancipation necessitates a revolutionary upheaval of existing socio-economic systems. German sociologist Max Weber extends beyond economic determinants to encompass authority and legitimacy in social structures. His concept of "rationalization" explains how bureaucratic institutions shape modern life and individual agency, encapsulating the tension between freedom and constraint in what he terms a *stahlhartes Gehäuse* (literally translated from German to "housing hard as steel," later rephrased as "iron cage" by Talcott Parsons) (Weber, 1905). In this view, power is not solely derived from economic capital but also social status, the State, and violence.

Considered one of the founders of modern political philosophy, Thomas Hobbes portrays power as an inherent aspect of human nature requiring absolute authority to prevent societal chaos. His social contract theory argues the need for a centralized sovereign entity to mitigate existential threats posed by human conflict (Hobbes, 1651). Two centuries later, French intellectuals Michel Foucault (1998) and Pierre Bourdieu (1990) challenged the notion that power is concentrated within specific forms by theorizing that it is dispersed throughout social

networks, always conflicting and coexisting alongside other forms. Rather, power is relational. This shift in thinking allows for a more nuanced exploration of how individuals and groups navigate and contest acts of direct and subtle domination in their quest for agency.

Power is further conceptualized by British theorist Stephen Lukes (1974, 2005), where he describes "three faces" or dimensions of power–visible, hidden, and invisible–which are expanded by John Gaventa (1980, 2006) to include the domains of levels and spaces, forming a "power cube." More recently, Flor Avelino (2021) delineates critical distinctions within the discourse on power, such as "power over" versus "power to," suggesting that these conceptual dichotomies are pivotal in analyzing social change. The implications of these distinctions extend into practical realms, where they inform strategies for innovation and resistance against oppressive structures. Concurrently, Onojighofia Tobore (2023) examines the paradoxical nature of power: while it can enable transformative action, it simultaneously harbours potential for corruption and ethical transgressions. Understanding these complexities is essential for fostering accountability within systems governed by hierarchical relations, including globalized agro-food systems.

As articulated by Boyd Swinburn (2019), the existing frameworks of specialized industrial agriculture are fraught with inequities, driven by commercial interests and government inertia, which collectively undermine efforts for true sustainable transformation. In the 2016 IPES (International Panel of Experts on Sustainable Food Systems) Report, Emile Frison identifies several 'lock-ins' that perpetuate concentrations of power in agro-industry, including path dependency, measures of success, short-term thinking, compartmentalized thinking, feed the world narratives, an expectation of cheap food, and export orientation. These mechanisms may relate to the visible political structures governing food systems and market organization, or to the

hidden and invisible conceptual barriers. Combined, they allow value to accrue to a limited number of actors, reinforcing their economic, political, and intellectual power and influence–a major reason why transition is needed (IPES-Food & Frison, 2016).

A paradigm shift to diversified agroecological systems first requires the recognition and transparency of the underlying power structures that govern food production, distribution, and consumption (Carriedo et al., 2022). Such an examination is critical for understanding the potential utility of regenerative agriculture. Before weaving together the intersecting implications of the agro-industrial paradigm, I frame my knowledge-seeking with the core teachings of agrarian political economy (APE) and feminist political ecology (FPE). In doing so, the soil of my dissertation will be better prepared to receive the germinating seeds of the analytical framework I put forth in Food Studies discourse-practice: relational foodways.

Agrarian Political Economy

Under modernization logic, small-scale farming, peasantries, pastoralism, and Indigenous foodways were, and often continue to be, seen by agri-businesses as inefficient or barriers to social transformation, to be replaced by large-scale, capital-intensive agriculture (Bernstein, 2009; Desmarais 2002, 2007; LaDuke, 2005; Norgaard et al., 2011; van der Ploeg, 2008, 2013). Contrastingly, under a cooperative household model, such as that supported by agricultural economist A.V. Chayanov, small-sale producers are seen as productive and sustainable with complex balances, self-exploitation, and differential optima (Bernstein, 2009). For over a century, scholars have been engaged in such debates (Engels, 1894; Kautsky, 1988; Lenin, 1938; Marx, 1867), positing the "Agrarian Question" which interrogates the extent and ways in which capital takes hold of agriculture, revolutionizes it, and establishes new forces and relations of production (Akram-Lodhi, 2013). The Agrarian Question has remained relevant throughout the

decades, particularly as capital penetrated agriculture in diverse and manifold ways, from the commodification of the seed, machinery, technological inputs, and land to labour.

In the 1960s-70s, the political intersections among peasant movements, revolutions in colonies, and increased awareness about agro-industry's environmental impacts gave rise to Critical Agrarian Studies (CAS).[19] Supported by a burgeoning analytical framework of APE, the social and gendered dynamics of [re]production, property, and power in agrarian formations were unpacked (Fairbairn et al., 2014; Schneider & McMichael, 2010). According to leading agrarian scholar Henry Bernstein (2010), there are four key questions one must ask when utilizing APE. The first question "Who owns what?" analyzes the social relations of different property regimes, the foreignization of space, and changing landholding structures. It investigates how the means of production and reproduction are distributed, as well as the processes of productive exclusion. The second question "Who does what?" examines social divisions of labour, the allocation of different responsibilities based on gender, age, and status, and the differential valuation of work based on those indicators. "Who gets what?" explores the social division of the distribution of income. "What do they do with it?" addresses the social relations of consumption, reproduction, and accumulation. Drawing from food sovereignty discourse, a further question to ask is "At what scale?," which encompasses a quantitative analysis of the amount of food production, the size of land required for production, and the amount of labour involved (Desmarais, 2015).

Within APE, small-scale growers are encouraged to influence broader political-economic processes shaping land entitlements and governance. Reducing vulnerability is partially contingent on afflicted populations possessing the rights and opportunities to control resources that allow them to withstand climatic events and exploitation (Fairbairn et al., 2014). Decision-making power over food production, distribution, and consumption helps to insure

[19] See Edelman & Wolford (2017) for a history of CAS.

marginalized populations against the fluctuations of market-oriented activities. Within a "new institutionalism" (Fox, 1992), producers would be the prime beneficiaries of State subsidies in seeds, fertilizers, credit, technical assistance, grain purchase, and water. Meanwhile, State food distribution networks would help increase food production, save foreign currency, raise nutritional levels, and enhance political legitimacy for the State. As intersectionality theory and scholarship in political action gained momentum, so too have dialogues and debates concerning large-scale land acquisitions, the financialization of food, and the feminization of agriculture (Akram-Lodhi et al., 2021; Borras et al., 2012; Bernstein, 2016; Edelman & Wolford, 2017; McKay, 2020; McKay, Nehring, & Catacora-Vargas, 2024).

Feminist Political Ecology

The appropriation of Nature, expansions of capitalist land tenure, and their resulting socio-ecological ramifications have often been understood through the analytical tool of political ecology (PE), of which there are numerous branches,[20] including FPE. Although the term 'political ecology' was originally coined by Frank Thone in 1935, it was revived in 1972 by anthropologist Eric Wolf. PE emerged in response to rising environmental degradation, when farmland financialization swept across the global economic landscape (Dietz, 2021). Looking beyond the relationship between capital and agriculture, PE investigates inherent power relations within ecological crises, as well as in the representation, management, appropriation, destruction, and knowledge of Nature (Peet & Watts, 2004; Peluso & Watts, 2001; Zimmerer & Bassett, 2003).

According to French philosopher Bruno Latour (2018), the relations of market deregulation, increasing inequalities, and climate change denial demonstrate the interdependency

[20] Other branches include Marxist PE (Foster, 2013; Schneider & McMichael, 2010), Gramscian PE (Mann, 2009), Poststructuralist PE (Escobar, 1996), and Postcolonial PE.

between ecology and politics. Through a "world-ecology" paradigm, Jason W. Moore (2015) speaks to these intersections by stating, "modernity's structures of knowledge, its dominant relations of power, re/production, and wealth, its patterns of environment-making: these form an organic whole. Power, production, and perception entwine; they cannot be disentangled because they are unified, albeit unevenly and in evolving fashion" (p. 3). Political ecologists may ask questions such as: How have the ways that people access, manage, and use natural resources influenced social relations of power? What are the underlying causes and consequences of environmental changes? How are the impacts of environmental degradation distributed? What political movements or reactions have emerged in response to ecological crises?

Kristina Dietz (2020) illustrates the dynamic nature of PE by defining it as 'a cross-disciplinary study field, a normative political commitment, a critique of positivist and apolitical explanations of environmental degradation, and a feminist perspective on the relationship between power, nature, and gender.' FPE, in particular, explores relations of production and reproduction, property, divisions and conditions of labour, constructions of identity, and hierarchies of epistemology through an intersectional approach of gender, class, caste, race, culture, and ethnicity (Elmhirst, 2011; Rocheleau, 1997, 2008). This framework investigates the gendered impacts of environmental changes resulting from historical-political processes on grower livelihoods and resistance dynamics. It supports a deeper comprehension of the actors involved in farming, the stakeholders most vulnerable to climatic and extractive-led development, and the composition of multiscalar resistance dynamics. Moreover, FPE underscores how environmental changes and representations of nature are socio-politically produced, how social relations of power and knowledge influence access to resources, and who is silenced within hegemonic institutions.

While researching and participating in the agricultural landscape of Wild Rose Country, the frameworks of APE and FPE elucidated the dynamics of land access, resource control, social relations of income and revenue distribution, and the scales of consumption, reproduction, and accumulation. I now draw upon these frameworks to discuss the relations of power and politics within agrarian regimes.

Political Implications of the Agro-Industrial Regime

Postcolonial scholar Edward Said (1978) emphasizes the direct connection between knowledge and power, or information and control. The cyclical process of knowledge-making and the codification of normatives shape social hierarchies and positions of power (El-Haj, 2008; Foucault, 1998). Who speaks, listens, records, and valorizes what is said is constructed in historical processes and institutionalized through political and economic influences (Trouillot, 1995). Positions of authority (i.e., members of the functioning intellectual group) can lead to the formation of "deputies" who exercise social and political primacy (Gramsci, 1971). In an agrarian regime, regulations are enforced by hegemony and the State wherein capital is the central mechanism of dominance, exploitation, accumulation, and conflict (Friedmann, 2009). Such regimes shift every 20 to 40 years, reflecting the flows of power and economic-political demands.

From the late eighteenth to early nineteenth century, widespread urban hunger across Western Europe and the North American colonies fuelled a global reconfiguration in capitalism's search for cheap food (Friedmann & McMichael, 1989; Grey & Patel, 2014). At the expense of the soil and racialized labourers, a hierarchy of food production, processing, and consumption was created to benefit those in the colonial metropole. Planted in the landscapes of imperialism and territorial colonialism were the seeds of a UK-centered Food Regime (1870-1940s), wherein

emerging settler states exported raw materials and dietary staples (e.g., wheat and meat) to support the working class of European industrialization (Holt-Giménez & Shattuck, 2011). After World War II, agriculture and food 'industries' became major drivers of the then leading sectors in technological innovation and profit: machinery and chemicals. Explosive factories began making synthetic fertilizers, and war chemicals were refashioned as pesticides and herbicides (Friedmann, 2009; Shiva, 2016).

In the heyday of the mid-twentieth century agricultural modernization project, a Capitalist Food Regime shifted its metropole to the United States. Reversing the flow of food from the 'Global South' to the 'Global North,' agricultural surpluses from the U.S. were dumped in 'undeveloped' countries under the guise of foreign aid and humanitarianism (Holt-Giménez & Shattuck, 2011; McMichael, 2009). Dependent on the Bretton Woods System, large-scale food aid shipments–which controlled world price formation for three decades–were legitimized by diverse stakeholders, such as corporations and commodity groups, policy-makers, and consumers (Friedmann, 2009). The global spread of industrial agriculture was further enabled by the failure of pro-poor redistributive land reforms and the Green Revolution (Akram-Lodhi, 2013). Despite peasant and Indigenous resistance movements, a 'technological fix' packaging high-yielding genetically-modified seeds with subsidised chemical inputs, irrigation, and machinery was interpolated into the agricultural economies of the Global South (Shiva, 1991).

During this regime, Canadian farmland was also shaped by financial speculation, land concentration, prohibitive land prices, and large-scale, input-heavy production (De Schutter, 2014; Kepkiewicz & Dale, 2019). To maintain a competitive edge in the global food sector, the Federal Task Force on Agriculture (FTFOA) argued for fewer farmers, more mechanization, and growth in farm size (Agriculture Canada, 1970). The recommendations within the task force's

report included a reduction in direct government involvement in agriculture, a phasing out of subsidies and price supports, a move away from wheat and dairy production, and a disincentivization of younger low-income farmers in the agricultural sector. Thus, government policies were enacted that supported trade liberalization, vertical integration, buyer consolidation, and export-driven agri-food models.

By the 1970s, the first food 'crisis' was characterized by a rise in commodity prices, concerns about global food supply, increased hunger, and the end of Bretton Woods. Within a decade, 'Third World' debt and farmer livelihoods were also in crisis, leading to what has been considered the third global agrarian regime. To save the US dollar and gold standard, neoliberal capitalist expansion replaced the 'Development project.' Neoliberalism is "a theory of political economic practices that proposes that human well being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade" (Harvey, 2005, p. 2). Through the implementation of structural adjustment programs (SAPs) backed by the International Monetary Fund (IMF) and World Bank, and institutionalized by the World Trade Organization (WTO) and its Agreement on Agriculture (AoA), a set of policy reforms were embedded in international treaties through bilateral Free Trade Agreements (FTAs) (Holt-Giménez & Shattuck, 2011). This led to the specialization of technical knowledge, heightened competition, elimination of price guarantees, tariffs, and national marketing boards, the reduction of government supports and national export management, and the weakening of national agricultural research and development in the Global South (Friedmann, 2009). Complex supply chains became dominated by large private sector corporations, farms in the Global North grew ever more consolidated, and the power of trading firms, financial enterprises, and Northern banks was strengthened. Thus, the

rights of sovereign states to regulate food and agriculture were restricted while poverty and food insecurity surged.

Neoliberal restructuring has profoundly influenced Canada's agrarian political economy, especially in the Prairie Provinces and Alberta. This transformation is evident in the livestock industry's restructuring, farm consolidation, land concentration, and the financialization of farmland. The financialization of farmland refers to the increasing involvement of financial actors in land ownership, treating it as an investment asset rather than a means of production. The "Changing Farmland Tenure and Food Sovereignty on the Canadian Prairies" project[21], led by Annette Aurélie Desmarais' Land & Food Politics Working Group, examines this trend, noting that investors acquiring large tracts of farmland can lead to land grabbing, impacting local communities and family farms. In a recent report exploring how financialization affects Alberta's farmland, Katherine Aske (2022) demonstrates how investor purchases and liberalized bank lending policies have driven farmland prices beyond their agricultural value, leading to high startup costs for new farmers and increased tenant farming. Roger Epp (2019; 2023) further analyzes the long-term decline experienced by rural communities in Alberta, emphasizing the need to understand the political and economic factors contributing to this trend. A 2008 report by the National Farmers Union (NFU), for instance, highlights the challenges faced by Canadian cattle producers, advocating for a discussion about corporate power, captive supply[22], and the profits of dominant players. Darrin Qualman and colleagues (2018) also discuss the decline in young farmers and the challenges of generational renewal in Canadian agriculture. Their study

[21] https://www.landfoodsovereignty.ca/changingfarmlandtenure

[22] Captive supply in the cattle sector in Canada refers to non-negotiated arrangements where packers commit to supply needs independent of cash negotiation. It includes formula-based sales, packer-owned, forward-contracted, and grid-marketing transactions

points to an ongoing income crisis, increasing farmland costs, and the growing power of agribusiness transnationals as significant barriers for new entrants into farming.

Collectively, these analyses underscore the significant impact of neoliberal policies on Canada's agrarian economy and rural landscapes. The consolidation of farms and concentration of land ownership in Canada have intensified, leading to fewer, larger farms and posing challenges for rural communities. Addressing these issues requires comprehensive policy responses that prioritize the sustainability and well-being of farming communities. Looking to the recent past, we can see how rising inflation, unemployment, increased housing prices and declining working conditions in the agri-food industry catalyzed the People's Food Commission (PFC) (Levkoe, 2014; People's Food Commission [PFC], 1980). Before 1977–when the PFC launched its first nation-wide engagement with thousands of diverse actors to discuss the food system as a whole–most food and agriculture initiatives functioned in siloes (i.e., fishing, farming, environment, etc.). Charles Levkoe (2014) posits that the fragmentation of food-related jurisdiction, compounded by nascent information communication technology and Canada's geospatial plurality, contributed to the challenge of unified and effective political action. Despite a lack of resources and political determination to affect changes, the PFC catalyzed a critical analysis of corporate controlled agribusiness, difficulties for farm livelihoods, and the impact of poverty on food security (Levkoe, 2014). These conversations set the stage for the National Food Security Assembly, Food Secure Canada, Canadian Association for Food Studies, People's Food Policy Project, UN Special Rapporteur on the Right to Food visit (De Schutter, 2014), and Regeneration Canada, among others (Agriculture and Agri-Food Canada, 2019; Levkoe, 2006).

With the tech boom of the late 1990s, a transnational social movement composed of Alternative Food Initiatives (AFIs) and Provincial Networking Organizations (PNOs) emerged,

strengthening farmer networks, outreach and information-sharing, policy-making, food charters, and engagement with Indigenous communities. At the same time, the increasing embeddedness of neoliberal ideology worldwide (i.e., free-market fundamentalisms and agricultural liberalization) paved the way for a Corporate Food Regime. In a "New Green Revolution" marked by privatization, financialization of the agrifood sector, and large-scale land acquisitions, links were solidified between food and pharmaceutical industries. Power shifted from supermarkets to financial enterprises, international food standards were introduced, and smallholders were contractually enveloped into corporate-controlled supply chains (Friedmann, 2009). As a result, peasant farmers–particularly across Latin America, Africa, and Asia–have been disproportionately displaced by large-scale land acquisitions (Akram-Lodhi et al., 2021), while biofuel production of conventional feedstocks (e.g., sugar cane, corn, soybeans) has risen worldwide (Allen & Wilson, 2008).

Over the past decade, international migrant workers have also played an increasingly important role in the global economy and labour markets, specifically in the agricultural sector (Richardson & Pettigrew, 2022; Horgan & Liinamaa, 2017). According to Statistics Canada (2024), nearly half of the nation's primary agricultural workforce (totalling 278,373 jobs on farms, nurseries, and greenhouses) are employed on a seasonal basis, with temporary foreign workers accounting for almost a quarter of total agricultural employees. Despite Canada's reliance on foreign workers to maintain the agriculture and agri-food sector (i.e., foodservice providers, food retailers and wholesalers, food and beverage processors, and primary agriculture), temporary residents are subjected to restricted work authorization and social citizenship rights, effectively having little to no sway in national policy (Akbar, 2022; National Farmers Union [NFU], 2024). Likewise, the voices of small-scale farmers in Canadian politics

encounter significant challenges in the face of a food regime controlled by highly profitable corporations (Bowness et al., 2021).

Socio-economic Implications: Consolidation and Individualization

Within an agro-industrial regime ruled by corporate oligarchies, the productive and gendered forms of social, economic, and political exclusion are palpable. As earlier discussed, this kind of extractive-led agrarian development has been characterized by a privatization of volatile markets and a high reliance and value placed on monoculture cash and flex crops (Akram-Lodhi et al., 2021; Bernstein, 2016; Borras et al., 2012). Flex crops (e.g., canola in Canada, soya in Bolivia, and oil palm in Ghana) are those with multiple uses, such as food, feed, fuel, and industrial material that can be easily and flexibly interchanged (Borras et al., 2014). As the cost of imported goods decreases and the cost of domestic production rises, so does a reliance on external outputs—such as genetically modified seeds, agro-chemicals, machinery, storage and processing facilities, and export markets—which are often inaccessible for small-scale farmers (McKay, 2015). Moreover, challenges are posed by competition for farmland, increased land prices and input costs, streamlined supply chains, reduced access to formal credit and food entitlements, and competition from subsidized industrial agricultural products.

These barriers have led to outright expulsion and vicious cycles of dependency for a vast majority of small-scale farmers around the world (McKay, 2017). Often, farmers are either absorbed into the short-term profitability of expanding extractive frontiers or are dispossessed of their agency within agrarian value-chains (Behrman et al., 2012; Fairbairn et al., 2014). If forced to resettle, the World Bank (2008) proposes urban migration as one "pathway out of rural poverty." The other two paths include advancement as a capitalist farmer and work as a rural wage labourer, which both have their own shortcomings. However, the inability of urban

economies to absorb rural migrants has led to what Mike Davis (2006) calls the "planet of slums." As articulated by Teresa Mares and Devon Peña (2012), "the perpetual process of structural violence experienced by peoples and communities displaced from the land and into the migratory streams [has brought] native [and non-Native] farmers into every major metropolitan centre" (p. 201). Further push factors for urbanization may include a lack of rural infrastructure, technology, economic opportunity, and feelings of isolation. Pull factors of urban centres, such as Calgary or Edmonton, may include visions of better opportunities for jobs, education, health care, food and water security, and modern amenities.

In Canada, urbanization and the decline of farming populations has been visible across all provinces. While there are fewer and fewer farmers and farm operations nation-wide, the average area per farm has grown with more area devoted to commodity crop production and ranching. Since 1976, total land in crops has risen by approximately 23.5 million acres and summerfallow land has declined by 25.5 million acres (Statistics Canada, 2022d). Out of Alberta's Total Land Area (153.6 million acres[23]), 32% is categorized as Farm Land Area, of which 63.6% is Cultivated Land Area, 30.8% is Natural Land for Pasture, and 5.6% is categorized as "All Other Land" (Alberta Agriculture and Irrigation, 2022). Of the 31 million acres of cultivated land, nearly 82% is cultivated as Land in Crops, while 16.7% is Tame or Seeded Pasture, and 1.2% is managed as Summerfallow. Alberta's agricultural landscape (Table 1) is reflective of the top two national farm production types: 1) oilseed and grain farming, and 2) beef cattle ranching, including feedlots (Statistics Canada, 2023b). These statistics and agricultural demographics are reflective of past, current, and future challenges for small-scale farmers in Canada at large,

[23] In Alberta, 5 million acres of Crown land is leased for agriculture and held under agricultural dispositions, which "involve collaboration between the Government of Alberta and the disposition holder to ensure that agricultural land use sustains environmental, economic and social benefits for the people of Alberta" (Government of Alberta, 2024a).

including farmland consolidation and competition with investment companies producing oilseed, grain, and beef (Kepkiewicz & Dale, 2019; NFU, 2015).

	Crop Types
Livestock	• Hens & chickens, hatching eggs, broilers & roasters, Cornish hens, turkeys, ducks, geese, cattle & calves, beef cows, dairy cows, pigs, sheep & lambs, horses & ponies, donkeys & mules, goats, llamas & alpacas, ostriches, bison, elk, deer, rabbits, minks, honeybees, crickets
Field Crop & Hay	• Oats, barley, wheat & durum wheat, rye, triticale, hemp, flaxseed, corn for grain & silage, canola, dry field pea, chickpea, fava bean, lentil, dry white bean, canary seed, alfalfa, hay & other fodder crops, forage seed, potato, mustard seed, sunflower, sugar beet
Field Vegetables	• Sweet corn, tomato, cucumber, green pea, cabbage, Brussel sprouts, carrot, beet, rutabaga & turnip, onion (dry, yellow, Spanish, cooking), garlic, lettuce, kale, rhubarb, spinach, pumpkin, squash & zucchini, asparagus
Fruits & Berries	• Saskatoon, apple, pear, plum & prune, sweet & sour cherry, apricot, strawberry, raspberry, cranberry, highbush blueberry, currant (black, red, white), haskap
Greenhouses	• Fruits, vegetables, cut flowers, herbs, potted indoor & outdoor plants
Other	• Sod, nursery products, Christmas trees, mushrooms

Table 1: Alberta's Agricultural Landscape

A Statistics Canada (2022a) report on the most recent agricultural census highlights a correlation between farm consolidation and the growing percentage of farms in the top two revenue categories: $1 million to $1,999,999 and $2 million and above[24]. In 2020, farms with sales of $1 million or more comprised nearly 10% of all operations, with oilseed and grain farming emerging as the most profitable sectors, followed by red meat and dairy production. These high-revenue farms dominated the share of national farm operating revenues, which reached a record $87.7 billion in 2022 (Agriculture and Agri-Food Canada, 2023). They also employed a larger proportion of farm workers and maintained a lower expenses-to-revenues ratio. According to the report, "on average, for every dollar in revenues, farms incurred 83 cents

[24] For more on Canada's farm revenue classes, as well as a comparative breakdown of farms reporting direct sales in the 2015 and 2022 censuses, see https://www150.statcan.gc.ca/n1/pub/96-325-x/2021001/article/00014-eng.htm

in expenses," with total national farm expenses amounting to $72.2 billion in 2020. In a campaign on *Protecting farmland for today and tomorrow*[25], the NFU states:

> "We view with alarm the encroachment of industrial corporations into the business of primary food production through direct ownership, vertical integration and contract farming. When investment of capital, whether foreign or Canadian, excludes local farmers from the land, rural disintegration occurs and food sovereignty is impossible…larger land holdings and the increasing size of farm implements create a vicious circle of concentration of farmland ownership and deterioration of rural communities and erosion of rural quality of life. As land prices increase, the higher value allows farmers to borrow more to buy bigger equipment – displacing more neighbours and putting greater pressure on the soil. As the cost of starting to farm keeps going up, farming is less and less possible for the younger generation " (2015).

In addition to the high cost and debt required to purchase land, as well as the increase in land-grabs by investment companies, the NFU's statement speaks to the additional barriers of accessing equipment, inputs, and seeds, which are similarly owned and controlled by multinational corporations (e.g., Massey-Ferguson Ltd., Case IH of CNH Industrial, Bayer Crop Science, Corteva Agriscience, etc.). While there were 247 Canadian manufacturers of agricultural implements in 1997–which employed just over 11,000 workers, with 90% of establishments employing fewer than 100 workers–the majority of machinery (e.g., tractors, swathers, combines, balers, plows, etc.) purchased for Canadian farms are now imported (Hamre & Asselstine, 2015). Likewise, the number of pedigreed seed farms[26] (i.e., producers of forage seed, hybrid seed corn, potato seed, vegetable seed, etc.) has decreased from 5,723 in 1982 to 3,487 in 2018, while the average farm size for seed production has increased by 200% during that timespan (Agriculture Canada, 2019). Lyle Weigum, co-operator of Winter's Turkeys Farm[27], speaks to the barriers for entry:

[25] Farmland | National Farmers Union (nfu.ca)
[26] For more on the Canadian Seed Sector, see: 2019_cssp-eng.pdf (canada.ca)
[27] https://wintersturkeys.ca/

> "Both my parents were farmers and their parents were farmers. My father started a farm from scratch and has now reached the point of retirement; my sister has taken over. If she didn't, it would have been absorbed by either another bigger farm or a Hutterite colony. People that want to get into agriculture have to start on such a small scale. Then they see what it takes to be successful, which is usually large-scale. There are such high capital barriers to entry that it discourages or bars a lot of people from entry. It's not that there are fewer people that want to farm; there are a lot of people that want to do this work. But getting started is so difficult. It's so big. And so, there are fewer and fewer farmers. The people who are passionate and industrious about it, I hope they can find a way."

The conditions of land ownership, labour, and mechanization play key roles in keeping costs down and profits up, and go hand-in-hand with market relations including wholesale and direct marketing strategies. The vast majority of yields from large-scale farms hold up Canada's agricultural export economy. In 2022, Canada was the world's fifth-largest agricultural exporter, with nearly $92.8 billion in exported agricultural and food products to almost 200 countries (Agriculture and Agri-Food Canada, 2023). That year, Alberta's total agri-food exports reached a record CAD $16.2 billion; the top five export markets included the U.S. with a 45.7% share, followed by China, Japan, Mexico, and South Korea (Alberta Agriculture and Irrigation, 2022). The domestic market is also central to the success and sustainability of the sector, with Canadians having spent $189.7 billion on food, beverage, tobacco, and legalized cannabis products in 2022. Most of these products are sold through wholesale markets, with only 13.6% of all farms having reported direct sales in 2020.

While the proportion and number of Canadian farms reporting direct sales has steadily increased from 12.7% in 2015–with vegetable and melon farms leading the way–farms earning $2 million or more accounted for less than 1% of operations in which direct sales made up more than three-quarters of total revenues (Statistics Canada, 2022a). Direct-to-customer sales are primarily relied upon by smaller farms, who also engage in multi-stream income generation such as CSA programs and value-added products. As indicated by agricultural economist Michelle St.

Pierre (2023), “The practice of selling directly to consumers is a response by Canada’s farms, mainly those closer to urban areas, to meet growing consumer demand for farm-fresh goods. Instead of going to the grocery store, consumers can purchase their food products directly from farms.” By employing diverse economic strategies, such as cooperative practices, farmers are more likely to remain financially viable within a capitalist market economy while fostering direct relationships with consumers who value sustainable food production.

Over the past two decades, there has been an increased demand for locally grown and raised products in Alberta. Despite this, the province's agricultural landscapes continue to be dominated by a productivist conventional agri-food model (Beckie & Bacon, 2019). Small-scale growers face multiple barriers that limit their ability to expand and serve broader consumer bases. These challenges stem not only from economic constraints but also from municipal, provincial, and federal policies shaped by hegemonic development frameworks. A major hurdle for small-scale farmers is the inaccessibility of fertile land with reliable water due to high costs, limited availability, and restrictive zoning by-laws. Beyond land access, provincial quota systems under the Marketing of Agricultural Products Act (2020) present additional challenges (Brislen, 2018; Desmarais & Wittman, 2014). Supply management is governed through designated marketing boards, such as Alberta Milk, which regulate the production of dairy, poultry, and eggs. While these structures help stabilize prices across the agricultural sector, they also create inefficiencies, such as surplus dumping. For example, since milk prices are controlled, dairy farmers must ensure their production aligns precisely with market demand to prevent price inflation. Any excess milk produced beyond quota limits must be discarded, leading to waste.

Regulations vary by province, but in general, small-scale farmers wishing to expand beyond set quotas must obtain appropriate licensing and purchase the rights to increase their

production capacity. This requirement presents a financial burden, as each unit of production (e.g., a chicken) necessitates an upfront investment (Brislen, 2018). Originally implemented to counter U.S. market consolidation and government subsidies for large agribusinesses, the quota system inadvertently disadvantages small-scale farmers. Those without significant capital or access to bank loans struggle to secure quotas, infrastructure, and necessary equipment, effectively excluding them from the market.

Supply management in Canadian agriculture is a contentious issue that elicits strong opinions from both supporters and critics. While many progressive small-scale producers recognize the benefits of supply management and advocate for reduced quotas to enhance accessibility, the commodification of the quota system remains a significant challenge. The NFU has been particularly vocal in addressing these concerns, emphasizing the need for reforms that support smaller-scale producers without undermining the stability of the system. To foster a more inclusive agricultural sector, policymakers must consider reforms that balance the protective aspects of supply management with enhanced accessibility for small-scale farmers. Options such as more affordable entry-level quotas, flexible licensing structures, and support mechanisms for new farmers could help bridge the gap between economic stability and market inclusivity. Without such reforms, the quota system will continue to serve as both a safeguard and a barrier within Canada's agricultural landscape.

Additionally, regulations on the sale of raw dairy products, transport and sale of uninspected meat, and the effective enforcement of additional intermediaries has put strain on some small-scale farming communities. For instance, when Health Canada implemented federal legislation prohibiting the sale of raw, unpasteurized milk in 1991, many dairy producers were affected. By using heat, the process of pasteurization can kill 90-99% of harmful bacteria such as

Salmonella, E. coli, and *Listeria*. As per the Dairy Industry Regulations Act, if a producer is caught selling raw milk to anyone other than a licensed milk processor, they could incur a fine and/or a suspension of their licence. One Albertan farmer[28] shared their story, saying:

> "When Alberta changed the regulations for dairy cows, we were selling raw milk at the time. They [inspectors] had 150 pages of evidence against us. Fortunately we had a good relationship with a politician, and the court stayed the charges. But it [raw milk] should be legalized, with regulatory agents in place to maintain responsible traceability in case someone gets sick. How many people develop sicknesses from the pasteurized product? Is milk still healthy after you have destroyed it? You can't raise cattle in that much filth and have a healthy animal."

Another institutional barrier for small-scale growers is inspection and slaughter regulations, which limit distribution channels for meat and eggs. Before the Canadian Meat Inspection Act of 1985, there was the 1971 Livestock Brand Inspection Act in Alberta. Both were implemented to identify food safety risks, prevent food pathogen contamination, and assure humane handling of animals at slaughter. One Albertan poultry farmer recounts how before 1971, and before refrigeration on the farm, they would process all their birds on their property to sell directly to customers; heads on, feet off, guts in, and feathers gone. Some were delivered to small grocery stores where the shop butcher would gut and process them.

> "Back then, the inspection control was done by whoever bought that bird. A customer could come out to the farm, pick any bird they wanted, kill it, and take it home. They could look at the guts, see if it had a head, if it got run over, and so on. They had as much information as anybody else could get. To save a trip out to the farm, customers could also send an agent on their behalf, who would make sure the bird they got was suitable to eat. It wasn't legal for me to pick a bird out for a customer, kill it, and sell it to them. We also never sold to a hotel or kitchen, just to people for their own consumption. This was all accepted until 1971. We continued our operation, technically running an unlicensed abattoir and transporting uninspected meat to our customers in town. When the birds were ready, there was an announcement in the local newspaper. Other farms weren't necessarily doing the same, but they never criticized us. In fact, they were our best customers!"

[28] The identity of these two research participants remain confidential due to the sensitive legal nature of the topics.

Rather, the criticism came from municipal health officials who showed up one day to their customer meeting point. They seized the 60 birds and gave the farmers a citation for transporting and selling uninspected meat. “After going to court, we never had an uninspected bird again. But the whole event hurt us badly,” his wife said while holding back tears. “But we are all back on track. And now, in 2023, you can kill a bird on the farm again, just as we did before, just as I did growing up! On the farm where I was raised, we couldn’t pedal what we just processed. We had to have a sale lined up beforehand.” Similarly, under the On-Farm Slaughter Operation (OFSO) licence, which was legalized in Alberta on July 29, 2020, ownership must be transferred by the OFSO to the individual(s) purchasing the live animal prior to slaughter. As the meat is uninspected, it is illegal to sell or further distribute the product. A 5-year licence costs CAD $100 and licence holders must submit a quarterly report demonstrating their adherence to slaughter limits. Although there are no limits for the OFSO licensee, the annual limits for each OFSO customer include six large red meat animals, twelve hogs, twelve sheep, twelve goats, and 150 poultry or other small animals.

While small animals under 500 pounds (lbs.) may only be sold to an individual for consumption by their household, animals exceeding 500 lbs. may be co-owned by up to four individuals and the meat shared with their households. So, if a farm wanted to sell the carcasses of their spent layers as opposed to composting them, they would have to obtain an OFSO licence and sell the live hens direct to individuals before slaughter. Likewise, the eggs once laid by these hens must be inspected to sell in bulk to grocers, restaurants, or hotels. Otherwise, they can only be sold direct to individual customs or through an official cooperative if they are considered a member farm. The OFSO licence program also offers the ability for licensees to provide an

outdoor location for on-farm slaughter and carcass processing for religious celebrations, per the ownership transfer of the live animal(s). One sheep farmer recounts:

> "Pakistanis, Afghanis, and Arabs are nice customers; we did a few kills here this year. There's such a range of competencies and preferences amongst the people coming to kill their own sheep. I have a Libyan family that comes out and I've never seen a nicer cut; the only item left behind, besides the hide, are the contents of the rumen. Everything else is used. Within a few days of taking the lamb home, they invite me for a feast where they roast up the head and guts. I would think there are hundreds of other farms that offer religious on-farm slaughter; it's very common. You just might not find that information in a national census."

One challenge faced by the 480 licensed OFSOs in Alberta is the requirement to sell entire animals, or as mentioned, halves and quarters for larger livestock. To sell individual cuts, which bring in more revenue, the animals need to be processed in a provincially-inspected abattoir. In Alberta, there are 43 red meat abattoirs and five poultry abattoirs, as well as 60 total Hutterite colony abattoirs for red meat, poultry, and both. While there are no inspected mobile abattoirs, there are 252 mobile butchers and 51 mobile butcher facilities (Government of Alberta, 2024b). Although this seems like a large number and variety of slaughterhouses, it can still be a big expense and distance for small-scale producers, depending on their location in the province. Additionally, inspected slaughter facilities still do not exist for specific animals in Alberta, such as ducks, making it impossible to sell the meat in bulk. The reasoning behind these regulations is to limit the risk of a foodborne illness outbreak, which is certainly significant. Nevertheless, it can be difficult for small-scale farmers to acquire customers with enough financial capital to purchase and store a quarter steer, yak, or farmed bison.

Furthermore, across Western Canada there has been a decline in the number of smaller cut and wrap butcher shops. "It's a real pickle," says one cattle farmer, "come slaughter time or hunting season, the remaining butchers fill up so fast and don't have the capacity to meet the needs of how many farmers require their services." Done well, skilled butchers make a huge

difference to consumers' eating experience, but it is certainly not a glamorous or wealthy trade. Ending a life, or hundreds to thousands, every single day is also psychologically taxing. It can lead to a necessary desensitization to death in order to show up day in and day out. So, are there less people wanting to go into the profession? Or is there interest but high barriers to starting and maintaining an economically viable butcher shop when Cargill is your competition?

In 2020, Cargill's main beef plant in High River, south of Calgary, shut down for two weeks because of a COVID-19 outbreak that eventually affected nearly half of its 2,200 workers.[29] This shutdown also impacted the processing of approximately 4,500 cattle per day–more than one-third of Canada's beef-packing capacity. Cargill's Case Ready plant in Calgary faced a much smaller outbreak, as did Harmony Beef Company in Balzac, JBS Canada in Brooks, and the Olymel pork facility in Red Deer. These closures, in addition to oversaturated butcher shops and key advocate producers, catalyzed the OFSO licence program in 2020. During a farm tour, one cattle farmer said, "these things [on-farm slaughter] are evolving. They need to be backed and encouraged by policies that have the flexibility for food producers to do what they do best, and to be able to live a balanced life."

Within the municipal boundaries of Calgary, regulations are also in place for what can be grown where, which is enforced by land-use zoning and policing (Mansfield & Mendes, 2013). Bylaws around raising, processing, and selling animals and by-products are also restrictive, as is access to publicly governed land, soil, and water (Beckie & Bogden, 2010), market regulations, and racialized spatiality (Kato, 2013). For instance, after twelve years of advocacy from the group Calgary Backyard Chickens, city council passed a bylaw in 2021 for an urban hen

[29] https://www.cbc.ca/news/canada/calgary/covid-19-outbreak-cargill-meat-processing-plant-calgary-1.5696008#:~:text=Cargill's%20beef%20plant%20near%20High,virus%20and%20two%20employees%20died.

licensing program.[30] After the pilot year, where permits were capped at 100 households, the program has been open to unlimited applicants. Due to Alberta food safety laws, permit holders legally cannot raise hens for meat or sell eggs to neighbours without meeting the aforementioned inspection guidelines. Again, this requires a trip to an inspection facility with associated costs.

Similar restrictions are enforced in the Loop Resource[31] program, which redistributes 600-1000 lbs. of surplus "food waste" daily from partner grocery stores (e.g., Calgary Co-operative Association Limited). Organic matter that would otherwise go to the landfill is redirected to charities, Save On Foods, and farmers outside of city limits at no cost. While no humans are allowed to consume the food, everything from day-old produce and bread to milk can help diversify livestock diets (i.e., for pigs, chickens, ducks, goats, and working dogs) and lower feed costs. However, for a rural farmer it can be time-consuming to pick up the pallets in town and sort through everything. Additionally, this program does not address the broader issues of single-use plastic and styrofoam packaging, which inevitably make their way to the landfill, nor of household food insecurity. How is it that farm animals can consume boxes of sealed cheese, pre-sliced fruit, and Greek yogurt when single parent renters cannot afford food between now and their next hamper delivery? This is just a small example of the gaps in our current food distribution and waste system, which still places profit above community needs. I mention these realities in Wild Rose Country to demonstrate the barriers and challenges small-scale growers and food-insecure households face. A system rooted in colonial, capitalist extractivism is set up to benefit corporations at the expense, dignity, and power of the people, and is reflected through racial and class hierarchies, gendered divisions of labour, and a separation of humans from nature.

[30] https://www.calgary.ca/pets/licences/urban-hens.html
[31] https://loopresource.ca/

Gendered Implications: Patriarchy and the Feminization of Agriculture

In feminist theory, uneven and gendered relations of power are embedded in the perception, access, control, and use of resources (Deere, 2017; Saunders, 2002). Feminist theory "treats gender as a critical variable interacting with class, caste, race, culture, and ethnicity to shape processes of ecological change, the struggle of men and women to sustain ecological viable livelihoods, and the prospects of any community for sustainable development" (Rocheleau et al., 1996, p. 4). Although many women worldwide are responsible for the reproduction of the workforce, the production of daily food, and the maintenance of the household, they often do not have access or control to land tenure, yield revenue, or public decision-making processes. The complex double to triple burden faced by women varies across societies, and is influenced by age, wealth and asset ownership, socioeconomic status, employment, size of the household labour force, the order of marriage, and culturally constructed gender norms (Deere et al., 2015; Rocheleau & Edmunds, 1997). Inequitable access to resources overarchingly perpetuates women's dependence on men, a devaluation of their knowledge systems, lower social recognition for their central roles in agriculture, and capacities for food security (Rocheleau et al., 1996).

In Canada, women were not legally considered 'persons' until 1929 ("The Famous Five," 2023). This decision, however, still did not apply to First Nations women and women of Asian heritage. While Cairine Reay Mackay of settler descent was appointed to the Senate in 1930, the first female First Nations Senator, Sandra Lovelace Nicholas of the Tobique First Nation, was not appointed until 2005 (Conn, 2020). Over the past nine decades, there has been a steady rise in societal gender equality and female representation within the agricultural sector. According to the 2021 Census of Agriculture, the percentage of female farm operators in Canada has increased

from 28.7% in 2016 to 30.4%, with a reported 79,795 female operators (Statistics Canada, 2022a). Analyzing provincial distribution shows that after Ontario, Alberta has the second most female farm operators with 18,525 or 23.2% of the national total; female operators account for 32% of the provincial total. Of course, these numbers do not account for all the women who regularly perform farm operations but are not considered head operators. While the majority of farm operators are male, their number has been steadily declining with a 5.8% drop from 2016 to 2021 (Statistics Canada, 2023a), consistent with the aforementioned decline in overall farm operators and operations.

As the male-dominated agro-industry continues to consolidate, thus reinforcing the colonial matrix of power among race, class, and gender, female growers will inevitably be affected unless small-scale farmers grow their alliances. Across the Prairie Provinces and into British Columbia, Executive Director and Co-Founder of the Young Agrarians Sara Dent is joined by a strong team of women (and men) including Alex Pulwicki, Kolby Peterson, Sara Yagelniski, Dana Penrice, among others, to mobilize horizontal knowledge-sharing around regenerative agriculture. The YA Apprenticeship program (YAA) and business bootcamp, for instance, have a large representation of female farmers, at least 50/50 if not more. The change in gender dynamics in Albertan farming initially came from farm-adjacent occupations as more women were being trained as agrologists, lenders, and buyers. Now, there is a rise in women being the sole farm owner or manager, entering into agriculture for the first time, and participating in national policy work. The NFU Women's Advisory Committee, for example, works to ensure that the voices of female farmers are heard in policy and advocacy by facilitating women's active participation at all levels of the union. Women also hold positions on the Boards of Directors and staff lists for Food Secure Canada, Organic Alberta, Regeneration Canada,

among other national organizations. Beyond farming, many of these groups promote the calls to action of the Anishinaabe-led Mother Earth Water Walks, Missing and Murdered Indigenous Women and Girls, and International Women's Day.

Economist Bina Agarwal (2003) argues the necessity of collective forms of resistance that address the gender gap and binary codifications, and enhance women's access to land and productive resources. Direct and indirect access to land benefits women by providing income from cultivation, serving as collateral for credit or as a saleable asset during a crisis, and increasing the probability of securing supplementary wage employment (Agarwal, 2003). Securing women's access to land also has the potential to improve children's prospects for education, health care, and future employment opportunities. To work toward these goals, Agarwal suggests a collective female management system that pools resources and negotiating power. Working collectively, she asserts, fosters a system of support, trust, knowledge-sharing, well-being, tolerance, equity, self-confidence, respect within communities, and control over more of the household income and decision-making.

Leading feminist political ecologist Dianne Rocheleau (1997, 2008) postulates a direct link between gender inequality, environmental issues, and the development process. In a branch of radical feminism called ecofeminism,[32] the association of women with nature is paralleled by oppression at the hands of patriarchy, global economic expansion, and environmental degradation. While ecofeminists pursue diverse paths, many have turned to historical analysis. In contrast to most nature theorists, who have focused on developing abstract theories and constructs for grounding moral conduct, ecofeminists have sought to situate the oppressions against women and nature in their socio-historical contexts. Although the former approach

[32] For foundational works on ecofeminism see, Adams (1993), Cuomo, (1998), Diamond & Orenstein (1990), Gaard (1996), Ortner (1974), Salleh (1997), Starhawk (1994), and Sturgeon (1997).

attempts to construct a universal moral foundation, the latter seeks to uproot the ideological substructure that prevents the growth of a consciousness toward nature. Over the past several decades, Vandana Shiva has been one of the leading environmental activists shedding light on the warlike underpinnings of industrial farming, in which the human-ecology relationship is one of domination and submission to produce society's desirable plants or animals at high yields and with heavy inputs. In Kolby's reflection on her experience as a woman in Canadian farming, she speaks to the ethos of ecofeminism without actually using the term.

> "In general, strong force, aggression, and domineering are of a masculine kind of energy. Regenerative farming appeals to a lot of women, as well as humans in touch with a more feminine kind of energy, because it's a reciprocal relationship. It gives and receives nourishment from the land; feminine energy is attracted to that kind of relationship. And it's not just women showing up. Among the men showing up, there is an attention to and intention of creating reciprocal relationships with land."

Kolby leaves me wondering: What kind of world do I want to help reveal and co-create with my community and kin? What kind of ancestor do I want to be? How can many of us reawaken the parts of ourselves that are fluent in language with the Earth?

Ecological Implications: A Changing Climate and the Human/Nature Dichotomy

Dominant discourse surrounding humanity's relationship with the environment often frames us as parasitic—a species that depletes resources, pollutes ecosystems, and accelerates planetary destruction. Evidence of this is undeniable: contaminated waterways, oceanic dead zones, collapsing food chains, and emerging pathogens. Industrialized capitalist agriculture, in particular, has played a critical role in these ecological crises, with profound consequences for social relations, especially for those who rely on land and water for sustenance (Fairbairn et al., 2014; Horrigan et al., 2002). For Indigenous Peoples, these disruptions are not abstract environmental concerns but ongoing extensions of colonial violence. The dispossession of land,

forced assimilation, and cultural erasure have long been justified through exploitative agrarian regimes (Adese, 2014; Aldern & Goode, 2014; Kimmerer, 2013). Despite these pressures, Indigenous communities continue to resist, maintaining land-based traditions that challenge the extractive logic of industrial agriculture.

It is important to recognize that ecological systems have always been dynamic, shaped by atmospheric shifts, tectonic movements, natural wildfires, and floods. However, the intensification of anthropogenic climate change—driven by capitalist expansion—has amplified these changes at an unprecedented scale. The visible scars of human-driven industrialization are etched into melting ice caps, acidifying oceans, and degraded mangrove forests. The challenge ahead is not simply to acknowledge this impact but to rethink our relationship with the environment—moving beyond the human/nature dichotomy toward more reciprocal, regenerative ways of living.

This destructive trajectory is not incidental but deeply embedded in the political economy of agriculture. Political ecologists have long argued that environmental degradation is inseparable from the social relations of production, power, and property (Dietz, 2021; Foster, 2013). As financial intermediaries expand their reach into extractive industries and foreign investment in large-scale agriculture becomes increasingly abstract, a widening knowledge gap obscures the social and environmental consequences of these systems. For instance, the general public may not be aware that the Agriculture, Forestry, and Other Land Use (AFOLU) sector is responsible for approximately 23% of anthropogenic greenhouse gas emissions.[33] These emissions absorb and emit radiation in the thermal infrared range, which are the fundamental causes of the greenhouse effect and, in turn, increased global warming. Rising atmospheric temperatures have multiscalar ramifications, including more intense storms from the correlated

[33] https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/

rise in water vapour, persistent desertification resulting in a loss of water stores, biodiversity, and crops (Sandford, 2015), and increased seawater temperatures which impact recurring climate patterns such as El Niño Southern Oscillation (ENSO) and the Pacific Decadal Oscillation (PDO). Over the last 50 years, the extremes of these cycles have been stronger than those of the pre-industrial era, and are predicted to continue intensification due to greenhouse warming (Grothe, 2019). As our foodways have become dependent upon globalized trade, local issues for food security are directly influenced by climate change around the world.

Data from the 2020 World Integrated Trade Solution (WITS[34]) platform shows the top countries from which Canada imports food, including the U.S., Italy, France, Mexico, and China. According to the International Trade Administration's Agricultural Sector market overview and trade data for Canada,[35] approximately two-thirds of all produce consumed in Canada and over 75% of Canada's fresh vegetable market is supplied through imports, flowing predominantly from the U.S. In 2021, nearly 37% of Canada's fresh fruit imports came from the U.S., while Canada absorbed more than 70% of U.S. fresh vegetable exports. Although Canada is known for their production and export of quality red meat, especially Albertan beef, it is still a large destination for U.S. exports of red meat products, which totalled USD $740 million in 2021. Canada's largest market for U.S. imports is consumer-oriented agricultural products, which stream into the retail, food processing, and food service sectors (i.e., supermarkets and restaurants). There is no doubt that integrated global trade is valuable, especially if consumers (including myself) want to keep eating bananas in January. But we need to be critical of the degree to which the Canadian food system depends on imports in a changing climate, as well as

[34] WITS is a data software on internationally recognized trade and tariffs developed by the World Bank, United Nations Conference on Trade and Development (UNCTAD), International Trade Center, United Nations Statistical Division (UNSD) and the World Trade Organization (WTO). https://wits.worldbank.org/about_wits.html
[35] https://www.trade.gov/knowledge-product/canada-agricultural-sector

how farmers and ecosystems across the world are being treated in the never-ending search for cheap food.

An article by nonprofit Action Against Hunger (2022) highlighted the current and expected effects of climate change on staple and cash crop yields and food security around the world. Key crops "which provide livelihoods to millions of small-holder farmers, and are vital sources of calories and culture for billions of people around the world." These include maize or corn, wheat, rice, soy, potatoes, bananas and plantains, cocoa, and coffee, primarily produced by China, the U.S., India, and Brazil. In crops such as wheat, soy, and rice–which over 3.5 billion people rely on for more than 20% of their daily calories–the availability of nutrients such as iron, zinc, and protein can be reduced by warmer temperatures and increased concentrations of CO2 ("8 Crops Endangered," 2022). With rising malnutrition and food prices, this problem is particularly troubling in countries that have limited food diversity and where people depend on just one or two staples for their nutrition. Aside from crops, global livestock and fishing industries are also facing risks, from contaminated waterways to unpredictable weather patterns, drought, floods, and wildfires to insufficient forage.

Increased atmospheric temperatures, which have coincided with a 4-12% decrease in annual precipitation compared to the mid-Holocene (Jomelli et al., 2011), not only impact crop yields, pest prevalence, and post-harvest storage conditions, but water availability for growers reliant on rainwater and glacial-fed watersheds. From the Canadian Rockies down to the Andes Mountains, glaciers are one of the biggest sentinels of climate change due to their close proximity to melting and thawing conditions (Demuth, 2012; Jomelli et al., 2011). In South America, for instance, projected atmospheric warming could result in a near-total loss of active rock glaciers–compositions of frozen rock debris and 40-60% ice–by the end of the century

(Rangecroft et al., 2016). Although glacial melting would suggest a positive trend in water availability, it is likely to be reversed in the near future. Increased glacier runoff is projected to slow until it reaches its maximum capacity and then begin a significant decline until the glacier has no more impact on its outflows (Dangles et al., 2017). Permafrost stores–the frozen ground beneath rock glaciers which remain at or below 0°C for at least two consecutive years–are also projected to shrink under warming conditions, which have the potential for an increased release of methane and heightened water insecurity (Rangecroft et al., 2016).

Along the Rocky Mountains of Wild Rose Country, glacial retreat and permafrost loss are a concern for farmers who rely upon their river watersheds to grow food. As emphasized in the City of Calgary's 2020 Watershed Management Report, there is "increasing pressure on our rivers, creeks, streams, and wetlands from growth in the region and a changing climate" (p. 3). Compounded by temperature extremes and seasonal fluctuations, water security has become a pressing concern for farmers' ability to grow crops and animals. At Happiness by the Acre (HBTA), farmers Sarah and Marcus rely on dugout water to graze their cattle, pigs, chickens, and ducks. If there is enough water to go around, it is also used to irrigate a passive-solar greenhouse and field market garden. Each winter, everyone crosses their fingers for a heavy snowpack. With a warm chinook in spring, the dugout is designed to capture snowmelt from the surrounding fields. But the winter snow has been mild in recent years, resulting in a steady decline in the dugout's water level. Richmond, a long-time shepherd, recounts the climate conditions during the first few years on his new farm, Regenera Ranch.[36]

> "The first summer [2021] we got moisture in August, so I was able to pasture the flock on the hay field after its first cut. The regrowth provided enough forage for the sheep and lambs to graze into the fall. Despite it being one of the driest years, the stock seemed to be in amazingly good condition coming off pasture in late fall. There are also about 40 acres of native rough fescue grass here, which should

[36] https://regeneraranch.com/

> make for good fall pasture, but it's a type of grass that needs more moisture. It didn't grow very well in 2021 because we were dry from May to July. Last year, [2022] the late summer and fall were very dry here, so the tame pastures didn't have much regrowth. We did have good rain in June, so the hay that did come off was quite rich, even with the legumes in a depleted state. But it wasn't enough. Most of the winter, the sheep were on hay that I hauled in, since I couldn't get enough bales. Last summer was also the first year that the Rosebud River, which flows through this property, dried up entirely. The old folks who have lived here for 40 years said they had never seen it dry up. During their first 30 years here, a small coolie would also have a seasonal flow, but the lack of brush along this part of the river due to previous overgrazing is more prone to desiccation with the higher summer temperatures."

Not only do contemporary agrarian dynamics impact the viability of small-scale farmers and environmental health, but are laden with biophysical contradictions. These include 'chronic epidemiological problems, disease threats, pesticide and herbicide exposure, workplace health concerns, psychological violence of intensive meatification, and chemical-laden environments' (Weis, 2010, p. 316). These health issues mostly affect "blue collar" farmers, not the agribusiness elites who profit the most from commodity crops and industrial livestock and control global value chains (Anderson, 2008). To bring this close to home, a mushroom farming business in Alberta was purchased a few years ago by a venture capitalist with limited knowledge on the production of fungi. In an off-site laboratory, mushroom strains are inoculated in a bag of hardwood substrate then delivered to the leased facility. Housed in an old building, the bags are placed in a tent kept at a consistent temperature and humidity. Once the mushrooms fruit, employees harvest and package them to distribute to organic food stores, markets, and restaurants in the area. A former employee shared:

> "Everything went really well when the operation first got started in the summer, when the doors were kept open. But then the owner ramped up production quickly, wanting more tents to grow more mushrooms. The old building couldn't keep up with the humidity and concentrations of spores began spreading throughout the building. Even though we were provided with respirators, the ventilation was so poor. In the winter months, the doors had to remain closed in order to keep the heat in. Eventually, the owner installed a big air purifier system, but it was a little too late. I began coughing all day every day, which made me

> frustrated. I struggled to get to sleep, so I was tired on end. With a poorer immune system, I became weaker and when I caught COVID, it all got to be too much. The same experience happened to many of my former coworkers. It is a shame, because the work was enjoyable, the people were nice, the wages and other conditions were good. But the long-term effects of breathing in those spores are worrisome."

Before Richmond settled on Regenera Ranch, he rented land here and there to build his livestock operation. One day while he was grazing on a pasture north of Didsbury, his flock was doused with glyphosate. The neighbour across the fence was desiccating a barley crop via airplane and must have not seen the flock. Within days, their mouths were swollen with pus and dripping blood, leading to a poor ability to eat. "The residues from the chemical compound interfere with the sheep's immune system and can be very serious. It took a few weeks of intensive efforts to bring them back to health, putting them through a shoot daily to give them medications. Fortunately, I had the help of a fella from Nicaragua; I couldn't have been able to treat them all on my own." In August, 2022, when the pastures were dry from minimal rain, Richmond's flock began escaping through the perimeter fences to graze on the green grass along the sloped embankments of a nearby roadway. With the help of his herding dogs, he began grazing the flock physically. "You want the sheep to stay settled and feed as much as possible to improve their condition. If they're too unsettled, they can become unfocused and flee the area. It becomes harder to predict their behaviour." One day while they were on the slopes, a crop sprayer began desiccating the barley field to the South. He was a distance away, so Richmond was not concerned about getting doused like years ago, but the pilot began making low dives, swoops, and spins right above them, run after run. "The animals began freaking out. I tried signalling to him but I don't think he noticed. With all the different hazards in farming, it can be hard to build a viable business."

Although commercial fertilizer use has steadily declined in Canada, 80% of field crop producers, 63% of fruit, vegetable, berry, and nut crop producers, and 39% of forage crop producers still report its application (Statistics Canada, 2022b). Likewise, the use of chemical inputs has remained integral to the $31.9 billion dollar primary agriculture industry (Blair, 2024; Government of Canada, 2022). On the Prairies, the shift from conventional tillage to reduced and no-till systems has contributed to greater use of herbicides for weed control, fungicides to combat fungal diseases such as fusarium blight, insecticides, and pesticides per unit cropland as the land devoted to glyphosate-tolerant canola, soybeans and corn has expanded (Government of Canada, 2022). While reduced tillage is important for soil health, a whole-systems approach to sustainable farming must be undertaken to prevent contamination of waterways and wildlife.[37] Industrial forestry systems–of which Canada is the world's leading producer–also rely on glyphosate to kill competitor deciduous plants. For seventeen years, Richmond did contract target grazing with flocks of 1,500-1,800 sheep on clearcuts in northern B.C. This work came as a result of the overuse of pesticides, which leached into salmon spawning grounds, poisoning and collapsing the salmon populations. The First Nation communities in the region were able to obtain a moratorium on the use of chemicals on the clearcuts, which opened the door for sheep grazing. The presence of domesticated sheep may have impacted the amount of available forage for native ungulates and there was a low risk of disease transfer, but when managed and cared for properly, the sheep were essential in reducing chemical impacts.

With advances in agrotechnology, farmers have been able to use slow-release fertilizer and variable-input rate applications, conduct soil sample tests, harness the benefits of drones and geographic information systems (GIS) mapping, switch to fully-robotic milking for dairy cows,

[37] To see an interactive map of the risk of water contamination by pesticides in Canada, go to: Pesticides Indicator - agriculture.canada.ca

use robotic greenhouse equipment, and increase precision with automated guidance steering. These all can help improve efficiency and reduce biophysical hazards. Moreover, there has been a federal push to integrate renewable energy production into industry sectors, including agriculture. Although only 10.2% of total farms in Alberta have reported having renewable producing systems for use on their operation or for sale–including solar, bioenergy, wind, and geothermal electric power generators–that number will likely increase in the coming years as federal and global policies are demanding a reduction of fossil fuel consumption (St. Pierre & McComb, 2022).

Despite a widespread push toward renewable energy, which has its own shortcomings in means of extraction and privatization, mainstream approaches to agrarian development continue to justify colonial measures of "growth and modernity" by perpetuating the utilitarian value of natural resources, as well as a constructed human/nature dichotomy and a unilinear concept of time (Gudynas, 2011; Latour, 2012; Reyes, 2001). Under modernization logic, for instance, ecological problems and crises are the result of market failures, "primitive" technologies, and unstable prices. Underdevelopment is perceived as a consequence of marginalization to political and economic relations, and as separate from the processes generating progress. But the roots of climate change, structural inequality, and the agrarian regime are rhizomatically connected. Although the social and ecological repercussions of extractive agro-industries have been hidden behind corporate agendas and conditioned consumerism, the soil is starting to erode for the world to see.

Since the early 2000s, these cracks have been highlighted by scholarly debates around epochal transitions. Has Earth entered into a new epoch induced by 'Man'–coined the Anthropocene (Crutzen & Stoermer, 2000)–or by capitalism as a mode of production–posited as

the Capitalocene (Moore, 2017; Tsing, 2015)? Critical scholars of decoloniality have refuted the Anthropocene for its anthropocentrism (Mignolo & Walsh, 2018). Anthropologist Anna Tsing (2015) critiques how the concept may "block attention to patchy landscapes, multiple temporalities, and shifting assemblages of humans and nonhumans" (p. 19). She goes on to describe the capitalist transformation of the environment as "Second Nature," wherein human concentration of wealth has been accumulated through making humans and nonhumans into resources for investment. In either case, the manifold implications of extractive-led industries are rooted in colonial, patriarchal ideology that not only enforces asymmetrical power relations around class, race, and sex, but perpetuates a false human/nature dichotomy.

Some scholars argue that this polarization began 10,000 to 12,000 years ago with the early domestication of wheat and barley in the Fertile Crescent, while others critique institutional religions whose texts promote "dominion over the world" (Bolen, 1998). Others claim it was propelled by the widely accepted Viconian-Hobbesian theory, which indicated that humans could only have a deep understanding of human creations, such as civil and political institutions, as opposed to the natural world which was created by a higher power. In Western narratives, natural entities like rocks and trees only held historical importance if they were utilitarian to the human experience. Within such historical accounts, movements amongst and across spaces became mappable and territorialized objects of scientific inquiry (El-Haj, 2008). Land, according to anthropologist Nadia Abu El-Haj (2008), was interpreted as "the object of material reconfiguration, symboli reinscription, and colonial desire" (p. 18). If and when recounted, landscapes and more-than-human kin were positioned as Others juxtaposing Human/Society; they filled in the historical gaps of chronological events "moving towards progress" (Fabian,

1983) and served as a "sublime landscape, colonial frontier, or primitive wilderness" (Cronon, 1996).

These historical assumptions have been reinforced, in part, by linguistic imperialism encoded in the English language (Cruikshank, 2007; Kohn, 2013). Rhetoric around nature frames the types of interactions we have with *it* (Kimmerer, 2013), transforming the relationships into scientific and empirical processes (El-Haj, 2008). Even when linguistic relationality is extended to non-human beings, it is often anthropomorphic or a manifestation of our own projections (Kohn, 2013). Such discursive and perceptual frameworks have discounted the agency of the land, water, mountains, air, and more-than-human beings, as well as Indigenous Ways of Knowing (Absolon & Willet, 2004), and have led to justifications for their exploitation. Certainly, frameworks such as 'alternative', 'development', and 'modernization' can be employed analytically to understand how capitalism as a system has integrated into our daily lives, our relationship with nature, and in food systems, but they need to be decolonized in their approach so as to not reproduce cultural and spiritual implications (Gudynas, 2011).

Cultural-Spiritual Implications: Disconnection & Sacridity

The global agro-industrial complex not only impacts relationships between humans and the environment, but has far-reaching cultural and spiritual consequences. It can lead to the erosion of traditional agricultural practices, disconnection from the land, and ethical dilemmas about how we treat animals and the environment. The loss of traditional agrarian practices has resulted in the homogenization of diets, cultural erosion, and loss of food sovereignty. As agro-industrial systems prioritize efficiency and profit, they tend to standardize food production, leading to the global spread of monoculture crops. This diminishes dietary diversity, undermining local cuisines, traditional foods, and culinary heritage. Moreover, as Indigenous and small-scale

producers are displaced or squeezed out, the ecological knowledge of plant varieties, cultivation techniques, and food preparation is vulnerable to being lost (not to frame it as "salvage anthropology"). These practices are vital to cultural identity and often carry deep spiritual significance, such as rituals associated with planting and harvesting. When communities lose control over their food systems at the hands of multinational corporations that dominate production and distribution, the impacts are felt not only by heightened food insecurity but an undermining of culturally specific ways of growing, distributing, and sharing food.

The agro-industrial complex promotes a model of food as a commodity rather than a sacred or cultural object. This can lead to a disconnection from the land and the natural cycles that sustain food production, replacing values of stewardship and reciprocity with consumption and profit-driven motives. Urbanization has also made people less connected to the land, agriculture, and natural processes, further distancing them from the sources of their food. Going hand-in-hand with urban growth is the consolidation of farmland, where small-scale growers are pushed out in favour of larger, mechanized operations. This can cause rural depopulation, altering the fabric of rural communities and displacing generations of people who have cultivated the land for centuries. Displacement is not only economic but also social, as traditional rural communities may lose their cohesive structures, rituals, and values centered around agricultural work.

On a spiritual level, the agrarian regime challenges values of stewardship, reverence for nature, and the sacredness of food. Industrial farming systems, particularly in livestock production, often involve practices that many view as unethical, such as factory farming and the mass slaughter of animals. These practices may be seen as spiritually harmful, as they reduce animals to mere commodities and fail to honour their intrinsic value. Some religious and spiritual

traditions advocate for respect and compassion for all living beings. Factory farming's disregard for animal welfare contradicts these values, raising concerns about the moral implications of modern food systems. Similarly, practices like monoculture farming and the heavy use of chemical fertilizers and pesticides may be seen as disrespecting the natural order and breaking the spiritual connection between humans and the environment, which some cultures view as deeply intertwined. Many spiritual traditions view agriculture as a sacred practice, where the earth is seen as a provider of life. The agro-industrial model, with its emphasis on profit and mechanization, often reduces nature to a resource to be exploited rather than something to be revered, nurtured, and considered a teacher.

On Turtle Island, Chickasaw author Sa'ke'j (Dr. James Youngblood Henderson) shares that "most Aboriginal worldviews and languages are formulated by experiencing an ecosystem" (Henderson, 2000, p. 259). To re-'searcher' Minogiizhigokwe (Dr. Kathleen E. Absolon) from Flying Post First Nation, "Indigenous knowledge is earth-centered, with ecology-based philosophies derived out of respect for the harmony and balance within all living beings of Creation" (Absolon, 2011, p. 31). A sacred agreement exists with the land that requires conscientious interactions, including habitat restoration, community complexing, and a re-learning of sustainable maintenance and engagement practices, as expressed by Anishinaabe Professor, Mkomose (Dr. Andrew Judge, 2020). Dr. Robin Wall Kimmerer (2013) emphasizes how plants, in particular, are our oldest teachers, whose inherent and sacred knowledge we must acknowledge. Wikwemikong plant educator, Joseph Pitawanakwat (2020), conveys how every plant has a unique identity, story, and gift that it communicates to guide and help us. Plants are not just considered food for sustenance, but are medicine for the body and spirit. The unsustainable practices of the agro-industrial complex—such as deforestation, soil depletion, and

water pollution—undermine the spiritual idea of living in balance with nature and can impact sacred stewardship. Moreover, its focus on processed foods and synthetic additives conflict with spiritual beliefs emphasizing balance, healing, and natural food sources.

Many communities and spiritual movements have resisted conventional agro-industry by reclaiming traditional farming methods, promoting food sovereignty, and advocating for more sustainable, localized, and spiritually mindful food systems. These counter-narratives stress the need for a return to more ethical and culturally relevant foodways that honour both the Earth and the people who depend on it. For Uruguayan environmental thinker Eduardo Gudynas (2011), Western conceptualizations of social citizenship and political communities must be expanded to include Nature, as both entities act upon one another with agency. To Aymara sociologist Simón Yampara (2001), balance is only achievable in the context of a social and ecological community, where local and regional needs, and their movements of resistance, must be considered at institutional levels. Looking south to Abya Yala (Latin America), a resistance movement that has gained traction is Buen Vivir/Vivir Bien, or 'the plentiful life/living well,' respectively (Gudynas, 2011). Rooted in the Quechua paradigm, sumak kawsay, and the Aymara cosmovision, suma qamaña, these pluricultural Andean ontologies[38] represent an alternative vision of development and well-being. Contrasting with the Western notion of progress, economic growth, material wealth, property ownership, and individual success, they emphasize harmonious relationships with nature, community, and spirituality (Escobar, 1992). Enshrined in Bolivia and Ecuador's constitutions, Buen Vivir calls for an economic model that prioritizes human dignity, respect for cultural diversity, reciprocity, and equity. It represents a profound shift

[38] Similar ideas exist among the Mapuche (küme mongen), Shuar (shiir waras), Guaraní (ñandereko), Maya Tsotsil and Tseltal (Lekil Kuxlejal), Zulu (ubuntu), kyosei in Japan, and swarāj in India.

away from the individualistic, growth-driven approach of modern capitalism toward a more collective, harmonious, and spiritually fulfilling way of life.

Living in a time of "extinction, stewardship, loss, sustainability, catastrophe, and regeneration" (Pétursdóttir, 2017, p. 177), it is critical to evaluate our connections with the world around us and foster genuine relationships with all beings (Cronon, 1996; Crutzen & Stoermer, 2000). In a "new climatic regime" focusing on the global, the wealthy have become more concerned with capitalism and property than the state of the environment and impoverished masses of the world; humans have lost their attachment to the Earth (Latour, 2018). Guided by the belief that objects, places, and creatures possess a spiritual essence, anthropologist Eduardo Kohn (2013) urges humans to reopen their minds to modes of thought that "reach beyond the human." To relate to the plants, soil organisms, and pollinators we rely upon for food. By radicalizing anthropocentric ways of knowing and practicing an "ecology of life," we can come to reknow ourselves as part of, not apart from, cultural-spiritual forms encoded in landscapes (Caradonna & Apffel-Marglin, 2018; Escobar, 1999; Ingold, 2000; Latour, 2012; Ortiz, 1969).

In this chapter, I wove the foundation of my knowledge basket. Guided by APE and FPE, I entwined the power and politics of global agrarian regimes. Through an analysis of the myriad implications of agro-industry, I critiqued manifestations of consolidation and individualization, patriarchy and the feminization of agriculture, the human/nature dichotomy, and cultural-spiritual disconnection. Next, I discuss the power and politics of grassroots mobilization. As scholars have written extensively on food sovereignty, security, justice and so on, my dissertation does not go in-depth on such themes. Rather, a critical discussion on the origins, approaches, and politics of residual, intersectional, and decolonial approaches to food systems will situate my analytical framework of relational foodways within discourse and the field.

Chapter 2: Germinating the Seeds

Power and Politics of Grassroots Mobilization

The processes of colonialism and neoliberalism have long been intertwined in the effort to control not just physical resources but the very minds of individuals and communities. These systems of power, while distinct in their historical and economic contexts, share a fundamental goal: to dominate and reshape how people understand the world and their place within it. Colonialism, through its conquest of territory, labour, and culture, established an infrastructure of dominance that sought not just to subjugate bodies but to mould the intellectual and cultural landscapes of colonized societies. Neoliberalism, which followed in its wake, has further intensified these dynamics, shaping modern societies by promoting individualism, commodification, and the supremacy of the market over all other environmental, political, and social considerations.

In contemporary society, when confronted with challenges, people are often conditioned to turn to capitalist institutions for solutions–superstores for clothing and household items, pharmaceuticals for health concerns, and wholesale markets for food, among others. However, individuals who lack the financial resources or social networks necessary to navigate the capitalist economy are marginalized or forced into a model of dependency to meet their basic needs. Imagining society as a triangle instead of an integrated circular system–where resources and opportunities might be distributed more equitably–a small intellectual elite hold control and political power at the narrow top, dictating policies and structures that benefit themselves and maintain their status. Below them lies the middle class, marked by its social issues and aspirations for upward mobility. At the broad base of the triangle are the poorer working class and subaltern groups who perform the labour that keeps society functioning. These groups,

although forming the majority of the population, are systematically excluded from national discourse and decision-making power (Spivak, 1988). In Gayatri Chakravorty Spivak's concept of the "subaltern," this exclusion reinforces that aforementioned cycle of dependency where marginalized communities are forced to rely on the very system that perpetuates their oppression.

Intersectionality further complicates this hierarchy, as class is not the only axis of oppression (Crenshaw & Schulz, 2016). Gender and ethnicity intersect with class to form multiple layers of marginalization, where women, Indigenous, People of Colour, immigrant, disabled, and 2SLGBTQQIA+ communities face compounded disadvantages. These dynamics manifest both in individual lives and within institutional structures like government, education, health care, and food systems. Black feminist thought provides a critical lens for understanding these intersections, particularly in the context of food systems and racialized labour. Carrie Chennault (2022) highlights how whiteness operates in food activism spaces, often excluding or marginalizing Black voices while reinforcing systemic inequities. Similarly, Hanna Garth and Ashanté M. Reese (2020) emphasize the racialized dimensions of food justice, illustrating how Black communities experience food insecurity and economic exploitation within the larger agricultural landscape. These perspectives challenge the dominant narrative of food systems as neutral spaces, revealing the ways in which race, gender, and labour intersect to shape food access and production.

The whiteness of farming demographics in Wild Rose Country further entrenches these inequalities, as historically, land ownership and agricultural decision-making have been dominated by white individuals and institutions. Reese and Dara Cooper (2021) argue that Black feminist praxis offers a reimagining of food systems centered on justice and liberation, pushing against the exclusionary frameworks that often define food movements. Naya Jones (2019)

introduces the concept of "slow violence" in Black food geographies, demonstrating how racialized communities endure long-term structural harm through systemic barriers to land access, agricultural participation, and economic security. Moreover, foreign workers in Canada—often racialized and precariously employed—face exploitative conditions that underscore the intersections of race, class, and migration status. Renata Motta (2021) discusses how social movements address these food inequalities, advocating for structural transformations that recognize the contributions and vulnerabilities of racialized labourers. Bobby J. Smith II (2023) expands on this by conceptualizing "intersectional agriculture," which critiques the mainstream food justice movement for failing to address the layered oppressions within agricultural labour and land distribution.

Thus, Martinican anti-colonial theorist, Frantz Fanon (1963), and Kenyan activist, Ngũgĩ wa Thiong'o (1986), call for a need to decolonize national consciousness; to get beyond the "colonization of the mind" that is reinforced by the language of imposed powers and the policies that maintain the system. Integral to social change and political engagement is grassroots organization that is rooted in global struggles and local realities. By engaging with Black feminist thought and intersectionality, a more just and inclusive food system can be envisioned—one that challenges existing power hierarchies and centers the voices of those most impacted by food injustices.

Global Movements and Food Sovereignty

In recent years, the global food system has come under increasing scrutiny for its reliance on industrial agriculture, monoculture practices, and corporate control. This centralized system has led to a range of social, economic, and environmental issues, including food insecurity, loss of biodiversity, and the disenfranchisement of small farmers. In response, grassroots movements for

food sovereignty have emerged as a powerful counterforce,[39] especially across Latin America, Africa, and Asia. These movements emphasize local control of food systems, sustainable agricultural practices, and the right of people to healthy, culturally appropriate food produced through ecologically sound and just methods.

One notable international farmers organization is La Vía Campesina (LVC). Founded in 1993, LVC emerged as a counterforce to neoliberalism, connecting people across the world with its fundamental commitment to humanism (Edelman, 2014; McMichael, 2014). LVC instills a global sense of place where the local and global are inseparable, where there is unity within diversity. Through 182 organizations and more than 70 popular education training programs, LVC connects over 200 million farmers on small and medium-sized farms, landless workers, Indigenous People, fishers, pastoralists, migrant farmworkers, rural women, and youth from 81 countries. As a "global voice of the peasants," LVC works toward equitable access to and control over resources and social rights, equal participation and representation in food politics, and the eradication of violence against women (La Vía Campesina, 1996). The influential movement has played a significant role in shaping global agricultural policies, particularly through its advocacy at international forums such as the United Nations Food and Agriculture Organization (UNFAO).

Another notable grassroots movement is Brazil's Landless Workers' Movement (Portuguese: *Movimento dos Trabalhadores Rurais Sem Terra*, MST). MST fights for land reform and the redistribution of unused land to landless farmers (Carter, 2022). The movement has successfully settled hundreds of thousands of families on land where they practice sustainable farming methods, growing food for their communities. In Africa, the Nyéléni movement brings together farmers, fisherfolk, and pastoralists to address the challenges African smallholders face due to land grabs by foreign investors, climate change, and neoliberal

[39] For more on social movements and contentious politics, see McAdam et al. (2001).

agricultural policies (Nyéléni, 2007). Named after a Malian peasant woman who was a symbol of agricultural resilience, Nyéléni Africa advocates for policies that support small-scale farmers, protect traditional knowledge, and promote agroecological practices. Sown in the soils of India and Bhutan during the emerging threats of the TRIPS Agreement (Trade Related Intellectual Property Rights Agreement) of the World Trade Organization (WTO), the Navdanya native seed repository has grown into a Global Movement for Seed Freedom (Navdanya International, 2023). For over 30 years, Navdanya–which translates to 'nine seeds' or 'new gift' in Hindi–has been fighting for the protection of biological and cultural diversity and for the right to save and share seeds as part of the Commons (Shiva et al., 2017).

The work of all four grassroots movements[40] are rooted in the principles of food sovereignty, a political project and social movement formed upon seven principles: Food as a Basic Human Right; Agrarian Reform; Protecting Natural Resources; Reorganizing Food Trade; Ending the Globalization of Hunger; Social Peace; and Democratic Control (Fairbairn, 2012; La Vía Campesina, 1996). With origins in Latin America, where the Spanish translation *soberanía alimentaria* predates food sovereignty in the literature by several years (Edelman, 2014), it is a continuation of radical anti-colonial daily modes of resistance. Centering the struggles of rural and urban food movements, this framework emphasizes the right of peoples and countries to decide how and by whom food is produced and consumed (Nyéléni, 2007). It calls for the right of farmers to produce food and receive a price that reflects their actual cost of production; the protection of eaters and farmers from international food dumping arising from [in]direct export subsidies, and thus the protection of national agriculture from low-priced imports; and for the phasing out of government measures that promote unsustainable agriculture (Wittman et al., 2010).

[40] https://viacampesina.org/en/; https://www.mstbrazil.org/; https://nyeleni.org/en/; https://navdanyainternational.org/

Taking a highly political stance, food sovereignty "directly challenges neoliberalism by pairing local and regional ecological agriculture with the large-scale organization of campaigns to challenge the corporate food regime" (Alkon, 2013, p. 2). The *Journal of Peasant Studies* (Volume 41, Issue 6, 2014) features multiple articles that offer critical perspectives on food sovereignty within the context of global agrarian transformations. From the historical emergence of food sovereignty as a counter-movement to neoliberal agricultural policies (McMichael, 2014), to the implications of its conceptual evolution over time (Edelman 2014), the Special Issue editors emphasize the importance of critical self-reflection to address the complexities and challenges inherent in implementing food sovereignty across diverse socio-economic and ecological contexts (Edelman et al., 2014). As both a mobilizing framework and a policy objective, Amy Trauger (2014) explores the political geography of food sovereignty, discussing how territorial transformations and power dynamics influence the realization of food sovereignty goals. Furthermore, María Elena Martínez-Torres and Peter M. Rosset (2014) highlight the concept of *diálogo de saberes* (dialog among different knowledges and ways of knowing), demonstrating the role of LVC in advancing food sovereignty in the face of neoliberal realities.

In Canada, two member organizations of LVC include Union Paysanne, an agricultural and civic organization operating in Quebec, and the NFU,[41] a national union of farmers that advocates for policy and reform (Dale, 2021; Desmarais & Wittman, 2014). Founded in 1969, the NFU aims to ensure that Canada's agricultural policies support environmentally sound, socially responsible, and economically viable farming practices. Similarly, Food Secure Canada (FSC) is an alliance of organizations and individuals working to create a more sustainable, just, and food-secure Canada. In the 2011 FSC policy platform, *Resetting the Table: A People's Food*

[41] https://www.unionpaysanne.com/; https://www.nfu.ca/; https://www.foodsecurecanada.org

Policy for Canada (PFPP), food security is articulated as the goal with food sovereignty being the means in which to get there. Bringing together a wide range of actors, including farmers, food advocates, and policymakers, FSC plays a crucial role in advocating for policies that support the right to healthy, local food. This important work is furthered by Canadian Organic Growers (COG), Manitoba Organic Alliance (MOA), Ecological Farmers Association of Ontario (EFAO), British Columbia's FarmFolk CitFolk, among others.

Connecting the Western Canadian provinces of British Columbia, Alberta, Saskatchewan and Manitoba is the Young Agrarians (YA). As a program of Agrarians Foundation (AF)–a charitable organization that provides public education on all things agriculture, community development, and environmental sustainability–YA is a "farmer to farmer educational resource network for new and young ecological, organic and regenerative farmers in Canada." Formerly housed under the non-profit Organic Alberta, YA supports the advocacy work of the NFU by bringing to attention the existence and needs of new ecological farmers. YA offers inclusive networking events, business mentorships and bootcamps, apprenticeship training with farm tours, land access programming, and reconciliation training for farming communities in partnership with Indigenous-led initiative, kinSHIFT.[42]

In partnership with the Indigenous Siksikaitsitapi Agriculture Project, Rural Routes to Climate Solutions[43] (RR2CS) is a regional organization that supports "an avenue for the Blackfoot Confederacy of Southern Alberta to highlight on-farm and on-ranch climate solutions (i.e., regenerative agriculture, farm energy efficiency, on-farm clean energy) on Blackfoot territory." For instance, the Kainai Iinnii Rematriation Project is a First Nation-led eco-cultural restoration initiative that has re-introduced plains bison back on the native mixed-grass pastures

[42] https://kinshift.ca/
[43] https://rr2cs.ca/siksikaitsitapi-program/; https://www.agrisystemsll.ca/events/rekindling-the-relationship-the-kainai-iinnii-rematriation

of the Blood Reserve. Also leading advocacy work for food sovereignty on Turtle Island are the Indigenous Food Systems Network (IFSN), Inuit Nunangat Food Security Strategy, Anishinaabe Agricultural Institute, and cultural revitalization programs across the continent[44] (Alfred, 2014). In North America, Indigenous food sovereignty[45] departs from an agrarian-centric vision to include culturally-specific food pathways (i.e., hunting, trapping, fishing, gathering), and is guided by the principles of sacredness, self-determination, action-based participation, and policy (Claeys et al., 2021; Morrison, 2011).

For example, from 2004-2016 the Okanagan National Alliance (ONA)–a First Nations Tribal Council representing Syilx communities in British Columbia and Washington State–worked on a community-based food sovereignty campaign to re-establish a healthy population of Okanagan sockeye salmon to Skaha Lake and the Okanagan River Basin (Blanchet et al., 2021; Hyatt & Stockwell, 2019). Guided by Syilx Elders, this First Nation-led initiative not only included fish fry releases, restoration of natural habitat and migratory routes, and water level control resulting in a rise of fish availability and harvesting, but culturally-specific practices, including prayers, salmon ceremonies, and feasts. Across the country in *Mi'kma'ki*–the ancestral and unceded territory of the Mi'kmaw people which is now Nova Scotia–members of the Eskasoni First Nation have been reclaiming their long-held foodway practices through Elder-led Youth Moose Hunt Camps (MacLean, 2021). Hunting and harvesting skills are passed down, along with principles of gratitude, humbleness, sharing, and utilizing all parts of the animal. South of the Medicine Line, the Cheyenne River Youth Project's Native Food

[44] https://www.indigenousfoodsystems.org/; https://www.itk.ca/projects/inuit-nunangat-food-security-strategy/; https://www.anishinaabeagriculture.org/food-sovereignty

[45] To learn more about Indigenous food sovereignty in the Canadian Context, see: https://www.indigenousfoodsystems.org/sites/default/files/policy_reform/pfpp-resetting-2011-lowres_1.pdf; and https://foodsecurecanada.org/sites/foodsecurecanada.org/files/indigenous-food-sovereignty-eng.pdf

Sovereignty initiative[46] supports Lakota youth to reconnect with land-based practices. Founding member of the Indigenous Seedkeepers Network, the intertribal nonprofit Dream of Wild Health provides educational programs reconnecting the urban Native American community of Minneapolis-Saint Paul with traditional Native plants and their culinary, medical, and spiritual use.

Coté (2016), who understands food as a sacred gift from Creator, emphasizes how restorative policy frameworks are needed for reconciling Indigenous foodways and teachings within colonial governance, and for supporting the active efforts of responding to community needs around food. Dawn Morrison (2011) of the Secwépemc Nation and director of the Working Group on Indigenous Food Sovereignty (WGIFS) urges Canadians to engage with Indigenous cosmovisions, struggles, and narratives, rather than subsume Indigenous food activism. To Cree Métis scholar Tabitha Robin Martens and colleagues, "food sovereignty is a concept and a practice that reflects and helps create awareness and recommendations around issues such as land reform, treaty rights and obligations, and the rebuilding of relationships between Indigenous and non-Indigenous peoples" (2016, p. 21). For instance, members of the NFU Indigenous Solidarity Working Group can learn from one another while supporting Indigenous land protectors (e.g., Standing Rock Sioux resistance to the Dakota Access Pipeline).

While food sovereignty movements broadly advocate for localized control over food systems, Indigenous communities—including in Canada—continue to fight for autonomy and self-sufficiency on their lands. As Sam Grey and Raj Patel (2014, p. 433) critically ask, "the call for autonomy immediately invites the question over who ought to be autonomous, and from what," underscoring the necessity of understanding food sovereignty as an anti-colonial struggle.

[46] https://dreamofwildhealth.org/; https://lakotayouth.org/programs/native-food-sovereignty/; https://nativefoodalliance.org/our-programs-2/indigenous-seedkeepers-network/

This framing highlights a key argument in food sovereignty discourse: that it cannot be separated from broader decolonization efforts, including territorial restitution and political self-determination. Many scholars argue that settler food sovereignty and Indigenous struggles for land rights, recognition, and restitution can be mutually reinforcing in Canada (Desmarais, Wittman & Wiebe, 2010). However, my research stance challenges this perspective, aligning with scholars such as Martha Stiegman and Mi'kmaw Canada Research Chair in Indigenous Governance, Sherry M. Pictou (2023), who argue that food sovereignty in Canada must be understood through the lens of Indigenous law and treaty relations rather than being subsumed within a settler-colonial framework.

Stiegman and Pictou's work on Mi'kmaq food sovereignty illustrates how Indigenous food systems are embedded in relational governance, kinship with the land, and treaty responsibilities that predate and transcend settler agrarian formations. Their research critiques the ways in which settler food sovereignty movements may inadvertently reinforce colonial structures if they fail to center Indigenous self-determination and land-based governance. This supports the argument that food sovereignty must be approached as a fundamentally decolonial project—one that prioritizes Indigenous legal orders, territorial restitution, and self-determination rather than merely integrating Indigenous food systems into settler-led models of local food control. While many of the principles and environmental goals of regenerative agriculture overlap with traditional Indigenous food practices (e.g., managing Bovidae on the Prairies), the two are distinct movements with different historical, cultural, and political contexts.

Food sovereignty in Canada has gained increasing traction in public discourse, often extending beyond its original decolonial and anti-capitalist roots. Most recently, the term has been invoked in discussions surrounding U.S. tariff threats under President Trump (see the 2025

NFU Call to Action[47]), COVID-19, post-secondary food insecurity (e.g., Concordia Food Coalition), and broader food system challenges. One example is the argument that Canada must treat its food system as a matter of national defense, as outlined by Karen Foster and colleagues (2025) in *The Conversation*. In this commentary, scholars highlight the vulnerabilities in Canada's food supply chains, particularly in the face of geopolitical instability, climate change, and trade disruptions. While the piece raises valid concerns about food security, its framing demonstrates how food sovereignty is often repurposed within nationalistic or State-centered agendas, rather than being understood as a grassroots, decolonial struggle for land, self-determination, and food justice. Similarly, when applied to discussions of food insecurity on university campuses—typically in response to rising tuition costs and inadequate student support systems—food sovereignty is often reduced to a question of access.

These uses of the term tend to emphasize economic resilience and consumer food security rather than structural transformation—particularly the dismantling of corporate agri-food monopolies and the restitution of Indigenous lands. This dilution of meaning risks transforming food sovereignty into a buzzword—one that obscures the political struggles of those who have long fought for genuine food justice and decolonization. The framework becomes divorced from the deeper decolonial commitments and systemic critiques that are central to its original articulation by La Vía Campesina. While my research situates the struggles of small-scale regenerative farmers in Canada within a broader critique of industrial agriculture, I do not equate them with the agrarian struggles of peasant farmers across the Global South. Yes, Canadian farmers face significant challenges due to neoliberal agricultural policies, including land consolidation, debt dependency, and corporate monopolization of seeds and inputs. However, these struggles unfold within a context where White regenerative farmers—however

[47] See https://nfu.ca/take-action-support-local-and-regional-food-supply-management-and-agricultural-workers/

marginalized we may be—continue to benefit from the structural privileges of settler-colonial land tenure and access to state resources. In contrast, peasant farmers, fisherfolk, pastoralists, and Indigenous communities in the Global South contend with a far more violent and extractive global agrarian regime—one shaped by military dispossession and forced displacement, unhindered foreign land grabs, and exploitative labour conditions, all of which are deeply tied to the legacies of colonialism and imperialism.

By recognizing these distinctions, relational foodways can offer a framework that critically engages with settler farmer struggles without collapsing them into the histories and ongoing realities of peasant resistance worldwide. This approach demands an honest reckoning with how food system reforms in Canada must center Indigenous land restitution and governance rather than simply advocating for a more equitable form of settler agriculture. As this chapter unfolds, it will further explore how relational foodways can navigate these complexities, advancing food justice in ways that neither erase Indigenous sovereignty nor appropriate the radical agrarian movements of the Global South.

While advancing national and international policy is vital to food system transformation, my research argues that alternative approigenousaches to the dominant agrarian regime must start at the local level where people are mobilized and close to one another. In an analysis of liberatory agrifood movements in North America, Patricia Allen and Alice Brooke Wilson (2008) articulate how "the local food movement, by de-industrializing the table through self-transformation and ethical food practices, has the potential to be an immediate 'here and now' way to build a different world and resist neo-liberalization" (p. 538). Grey and Patel (2014) argue for daily modes of opposition aligned with global grassroots movements against intensive corporate agriculture. By enacting "spatial resistance," Mares and Peña (2012) posit how we can

come to re-know our "community, cultural, and place-based identities" tied to the land, which itself is a political act. Growing power within a community network–whether that be a neighbourhood block or regional farmers cooperative–can more effectively and safely enable everyday forms of resistance and renewal (Scott, 1985; Kerkvliet, 2009) that coalesce with broader collective movements (Choudry & Kapoor, 2010; Edelman, 2001; Giugni et al., 1999; Tarrow, 1996). I therefore argue that the seeds of relational foodways must be germinated on the land before they can root down and scale out. Next, I discuss the local actors, challenges, and pathways for social mobilization and food system transformation in Wild Rose Country.

Local Movements and Alternative Food Networks

As the world becomes more aware of the drawbacks of globalized, industrial agriculture, local food systems offer an alternative that prioritizes quality over convenience. In recent years, local food movements[48] and alternative food networks (AFNs) have gained significant traction around the globe. These movements emphasize the benefits of eating locally grown and produced food, including environmental sustainability, support for local economies, and the promotion of healthier lifestyles (Edwards, 2016; Goodman et al., 2011). Distinct from "alternative food" (i.e., organic, specialities, local labels) that continues to operate within the conventional system, "alternative networks" involve a diversification of actors, relationships, and outlets that challenge the dominant system to uphold an "agriculture of the middle" (Brislen, 2018; Clark et al., 2021; Rosol, 2020).

Within AFNs, actors may include individual producers and consumers, non-governmental and nonprofit organizations, activist alliances, businesses, government entities, and alternative food initiatives (AFIs) such as political and charitable organizations (Cadieux & Slocum, 2015;

[48] For more on the history of local food movement in Canada, see Elton (2015).

Levkoe, 2006; Rosol, 2020). Distribution channels include direct marketing through CSAs, farmers markets, and food box schemes, farm-gate retail, local restaurants, and cooperatives (Beckie & Bacon, 2019). Consumers involved in the local food movement are motivated by various factors (Elton, 2011). One primary reason is the desire for fresher and more nutritious food. Locally sourced food is often picked at peak ripeness and reaches the consumer much faster than food that travels long distances, resulting in better flavour and nutrient content. Many people are driven by ethical considerations, wanting to support local farmers and reduce the environmental footprint associated with transporting food over vast distances (Martinez et al., 2010). By reducing the distance food travels–sometimes referred to as "food miles"–local food systems can significantly lower transportation-related emissions. In the early 2000s, the "farm-to-table" movement gained popularity as it advocated for food sourced from nearby farms and producers. Moreover, by purchasing food from local farmers, consumers help to keep money within their communities, supporting small businesses and promoting economic resilience (Gale, 1997). This is particularly important in rural areas, where agriculture is a primary source of income and employment.

AFNs also foster closer connections between consumers and producers, creating a greater sense of community and trust. In Calgary, the farmer-owned cooperative YYC Growers and Distributors (YYCGD) was integral to the local food movement[49] for half a decade. Emphasizing "healthy ecosystems, regenerative practices, and seasonal goodness," it connected Calgarians (and area) to over 24 farms in Southern Alberta. Customers could join their Community Supported Agriculture (CSA) Vegetable Harvest Box (CAD $35.00/box) with add-on

[49] Watch the New Urban Farm Partnership video (2016) 'Cultivating Calgary's local food resiliency', available at: https://vimeo.com/160987626; GROUNDED (2020): https://www.storyhive.com/projects/6128#project_pitch; and the Emerald Documentary Series Season 3: https://www.youtube.com/watch?v=wdSDo5tlmj0&feature=youtu.be

subscriptions. Through the CSA or online farm store, members could access GMO- and glyphosate-free produce, microgreens, grass-fed meats, fresh eggs, B.C. fruit, and locally roasted coffee. YYCGD was a major outlet for most of the small-plot intensive (SPIN) outdoor operations in Calgary, including Root and Regenerate Urban Farms (RRUF), Highfield Regenerative Farm, Chef's Table, and Leaf & Lyre Urban Farms, who also distribute to restaurants, farmers markets, and their own CSA programs. Many indoor container and warehouse growers relied on YYCGD to move their microgreens (e.g., Micro YYC, Little Sprout House, Micro Acres, Sunleaf Microgreens YYC, and Holistic Urban Farmer), herbs and leafy greens (e.g., The Basil Ranch, Deepwater Farms, Greengate Garden Centres LTD., and Lil Green Urban Farm), and mushrooms (e.g., Pennybun's Mushrooms) year-round. It was also a hive for beekeepers (e.g., MOB Honey, Buzzy Bee Honey, Forever Bee, and The Urban Bee Hive), and supporter of Calgary Harvest, a nonprofit organization connecting homeowners with registered fruit trees to Calgarians interested in picking their apples, crabapples, plums, pears, and sour cherries.

Beyond the market, YYCGD connected the community with educational opportunities and events hosted by the Calgary Horticultural Society, Urban Farm School, Permaculture Calgary Guild (and Prairie Sage Permaculture, Verge Permaculture, Permeate, reGenerate Design, Urban Farm Permaculture Project, and FoodScape Cooperative), and a targeted grazing program using goat and sheep herds to manage renaturalization projects across the city's bluffs. Forming a kind of "food hub," YYCGD was one of the go-to places to learn about and acquire skills in sustainable agriculture, to establish partnerships, and to advocate for AFNs at the policy level. For instance, several founding farmers of YYCGD were consulted on the City of Calgary's 2012 CalgaryEATS! Food Action Plan,[50] and participated in early conversations for the 2023

[50] https://www.calgary.ca/major-projects/food-action-plan.html

Food Resilience Program. Co-owner farmers have also supported the food access and emergency sector through donations to the Calgary Community Fridge, Fresh Routes, and The Alex Community Food Centre, to name a few.

Unfortunately, YYCGD closed its operations in 2023 due to financial setbacks, a high employee turnover rate, heavy reliance on volunteer labour, and insufficient customers. While local food movements can contribute to food resilience by decentralizing food production and minimizing supply chain disruption, they are vulnerable to a number of economic factors, including competition with mass-produced goods, market saturation of premium products, and fluctuating demand. In a U.S.-based case study on CSA participation by Yuki Kato (2013), the researcher highlights how even with increased opportunities for relationship-building and knowledge-sharing between growers and consumers, farmers and grower cooperatives are still challenged with engaging local residents, and therefore increasing production. In March 2023, about a year before its disintegration, co-owner of YYCGD Rod Olson expressed how the cooperative was down to 300 CSA Harvest Boxes a week; 500 was their sustainable target:

> "During the pandemic, we saw an uptake in shareholders. People could not travel, and so they put their interests and dollars in the local economy. But now, post-COVID, people are wiped out; they just need to do the most convenient thing. Regenerating our food system is not convenient. We are fighting against the convenient mecca of the industrial food system."

The closure of YYCGD impacted both local growers and consumers in the region's AFN. Several farmers were never paid for orders they had delivered. Some CSA members were not reimbursed for their final, foodless subscriptions. Their social media platforms went silent, leaving the public unaware of the dire situation. The poor handling of this situation left a sour taste in the mouths of many community members. Mutual trust is a key ingredient to the long-term viability of a CSA or AFI, and when broken, can be

difficult to rebuild. Fortunately, the majority of the aforementioned businesses, not-for-profits, and social enterprises in Wild Rose Country have remained alive. Some are structured differently than they were before (i.e., independent operation to partnerships), some are operating on a larger or smaller scale, and some have found a way to form new hubs (e.g., Mountain View Growers).

The importance of local control to democratic decision-making (Beingessner, 2013) is invaluable in supporting communities to rebuild socially just, economically viable, and ecologically sustainable food systems (Blay-Palmer et al., 2013). However, as Melanie Dupuis, David Goodman, and Jill Harrison (2006) make clear, the local is often a site of inequality. In their analysis of the evolution of and departures from AFNs, Marit Rosol and Ricardo Barbosa (2021) question the extent to which AFNs challenge or reproduce the capitalist system, and effectively, highlight the dangers of commodification of alternative food. As AFNs often work within existing market structures to create new purchasing options, they do not necessarily constitute "alternative economies" (i.e. social enterprises, co-ops, solidarity economy, food sharing, volunteer and in-kind labour) that strive to radically decommodify food (Fairbairn, 2012; Rosol, 2020).

Incorporating an intersectional analysis of place-making, race, and labour in AFNs is crucial for understanding how these spaces can both reinforce and resist structural inequalities. Riann Lognon's (2024) Calgary-based work, *Re-Imagining Homes in New Lands: Gardening and Anti-Racist Storytelling With Newcomer Youth of Colour*, provides a fresh perspective by highlighting the ways in which racialized communities—especially youth—engage in gardening as a form of care, resistance, and belonging. Lognon's research underscores how newcomer youth of colour use gardening not only to access food but also to reclaim space, build

community, and challenge dominant narratives about who belongs in agricultural and food spaces. This approach demonstrates that food networks are not merely economic or ecological systems but also deeply social and political ones, shaped by histories of exclusion and labour exploitation. By centering race and care, Lognon's work pushes us to reconsider how AFNs can either reproduce racialized hierarchies or serve as sites of empowerment.

Centering an intersectional lens is particularly important when analyzing labour within AFNs. Many of these networks rely on the unpaid or underpaid labour of racialized individuals—especially migrant workers and marginalized urban growers—whose contributions are often invisibilized within mainstream narratives of sustainability and food justice. Without addressing the racialized dimensions of labour and land access, AFNs risk perpetuating the very inequities they seek to challenge. Furthermore, Lognon's focus on anti-racist storytelling as a method of engaging with place-making highlights the significance of lived experiences in shaping food landscapes. Storytelling—also demonstrated in my research—offers a powerful counter-narrative to dominant agricultural histories that have erased or marginalized the contributions of racialized communities. By recognizing the role of race and care in food systems, scholars and activists can work toward more inclusive and justice-oriented models of AFNs.

Thus, by practicing a "reflexive politics of localism" (Dupuis & Goodman, 2005), AFNs can apply a "progressive sense of place" in which the scope of inequalities wrought by globalization and neoliberalism can be articulated in order to work toward social justice (Allen & Wilson, 2008; Cadieux & Slocum, 2015). In the processes and relationships of localized social movements, it is essential to connect with global resistance movements working to prevent the disappearance of local food cultures and traditions, such as Conscious Planet's Save the Soil

Movement, Terra-Madre, and Slow Food to name a few (Amo, 2023). Moreover, it is crucial to build alliances for collective action that span spatial and political bounds.

Challenges for Grassroots Mobilization

Despite their successes, grassroots movements face significant challenges both locally and globally. One of the major obstacles is the worldwide dominance of industrial agriculture, which is supported by governments and multinational corporations. These corporations promote monoculture, large-scale farming, and genetically modified crops, often at the expense of small farmers who practice more sustainable methods. Land acquisitions by agribusiness investors often displace local communities and undermine their ability to control their own food systems. Trade agreements and policies often favour large agribusinesses, making it difficult for local producers to compete in global markets.

At the local level, one of the primary obstacles for AFNs is cost. In Canada, locally sourced food is typically more expensive than mass-produced, industrial food products. This price difference can be a barrier for lower-income households, who may not have the financial flexibility to prioritize local and organic options. Efforts to make local food more accessible, such as farmers markets that accept food assistance programs, are critical in ensuring that all members of society can benefit from the movement. Besides the "local trap" (Carolan, 2016; Hinrichs, 2014), the gap that many AFN organizations fall into is the contradiction between critiquing the industrial agrarian regime and the neoliberal nature of their market-based, entrepreneurial, consumer behaviour focus which assumes functions that were formerly provided by the State (Brown & Getz, 2008; Peck & Tickell, 2022). Another challenge is scalability. While local food systems work well in some areas, they are not always practical in regions with limited agricultural capacity, such as urban centres or places with harsh climates. To meet the

growing demand for food in an increasingly urbanized world, cities need to explore innovative solutions, such as urban farming and vertical agriculture, to complement local food efforts. Furthermore, consumer habits are difficult to change. The convenience and low cost of industrially produced food have created a culture of fast, cheap meals that can be difficult to disrupt. Educating consumers about the benefits of local food and encouraging shifts in purchasing behaviour will require time and significant advocacy.

Another challenge for grassroots mobilization is the impact of climate change, which disproportionately affects small farmers who are often located in vulnerable regions. Droughts, floods, and shifting weather patterns can devastate crops and reduce yields, further entrenching food insecurity. While regenerative practices can mitigate some of these effects, the scale of the climate crisis presents an ongoing threat. Nevertheless, the growing global awareness of the environmental and social impacts of industrial agriculture provides hope that grassroots movements will continue to gain momentum and influence policy and power dynamics. Next, I intercrop the seeds of my analytical framework–relational foodways–within the polyculture beds of residual and intersectional approaches to food system transformation.

Residual Approaches

Food Access and Security

In most Canadian cities the dominant approaches to agrarian and community development are reactionary and needs-based, focusing on increasing food *access* and *security* with limited ability to disrupt hierarchies of power and control (McEntee & Naumova, 2012). Defined by the UNFAO in alignment with the 1996 World Food Summit, "food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious foods

which meet their dietary needs and food preferences for an active and healthy life" (2006, p.1). On the flip side, according to the Alberta Health Services Nutrition Guideline: Household Food Insecurity, food insecurity is "the inability to acquire or consume an adequate diet quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so based on not having enough money" (Alberta Health Services [AHS], 2013, p. 2).

When discussing food access and security, conversations are often chaired within poverty, income, or neo-Malthusian discourse of overpopulation and scarcity. Two myths that enable transnational corporations, supermarkets, and deficit-based development platforms to benefit at the expense of small-scale farmers and food-insecure populations are that the world requires capitalist industrialized agriculture to feed us, and that population growth is surpassing productive food capacities. According to a recent study by Mike Berners-Lee et al. (2018), "the current production of crops is sufficient to provide enough food for the projected global population of 9.7 billion in 2050, although very significant changes to the socio-economic conditions of many and radical changes to the diet of most will be required" (p. 11). Widespread food inequality rather stems, in part, from the mismanagement of how the majority of the world's food is grown and circulated, including the shortfalls of access and distribution, which is controlled by an increasingly corporatized agro-food sector (Akram-Lodhi, 2013; Holt-Giménez & Shattuck, 2011).

From a needs-based approach, issues surrounding access and security reduce food to a commodity to be intensified and marketed through agro-biotech solutions (Claeys et al., 2021). Income-focused approaches to development concentrate on achieving outcomes, implementing performance measures, and reporting on indicators using results-based management techniques (AHS, 2017b). Entrepreneurial theory similarly assumes that the more you produce and

distribute, the more you can consume and prosper. Rooted in modernization logic and the neo-Keynesian "development decades" of the 1960s-80s (Holt-Giménez & Shattuck, 2011), these approaches externalize the socioeconomic, ecological, and political implications of large-scale industrial agriculture by claiming its necessity to "feed the world."

In North America, the responsibility for addressing issues of food insecurity shifted from the public sector to private acts of charity and food banking during the neoliberal government agendas of the 1980s (Henderson, 2004; Macias, 2008). Contextualized within a free market economy–in which prices are determined by unrestricted competition between private businesses–large corporations (e.g., Walmart) proudly donate, or rather dump otherwise "unwanted" foods, to food banks and not-for-profits while receiving tax breaks (McEntee & Naumova, 2012). Most emergency food programs are reliant on donations and volunteers, are subject to philanthropic priority changes, and can be severely impacted if global supply-chains are disrupted (Guthman et al., 2006). Operating on a short-term food strategy, questionably nutritious foodstuffs are redistributed to food-insecure populations who are stripped of dignity and choice, although this is starting to change. Political abstractions of identity still define who is "needy and hungry"–women, children, elderly, families, working poor, etc. (Henderson, 2004)–and thus "eligible" if the criteria are met. City of Calgary Community Social Worker and co-facilitator of the YYC Food Collaborative, Nicola Youle, speaks to access barriers vis-à-vis organizational criteria.

> "The formal or informal criteria used by organizations for who they can serve can be based on a number of determinants, including income, residential location, or certain population categories. From an organizational standpoint, the question is, can this person meet this criteria? Whereas the client is asking, can I rely on this organization to meet my needs at this moment? So, it is vital to work towards a more coordinated response system, where there is one point of access to know what capacities and criteria each organization has in real time. This would minimize the time, effort, and resources it takes to direct people to the agency that

> can best meet their needs. It should not matter where you live, who you are, or what you're looking for. What matters is that you have access to emergency food within a timeframe that is reasonable to meet your needs."

Although immediate caloric need is fulfilled by the emergency food sector, long-term health implications and their associated costs are pushed to the margins of concern or are niched into a separate category for poverty alleviation (e.g., health care system) (Weis, 2010). As articulated by Kirsten Cadieux and Rachel Slocum, "work done under the auspices of food security has often reproduced the socially inequitable conditions and relations it nominally seeks to address" (2015, p. 4). Although food banks, hampers, and free meals are currently essential for meeting basic needs, they do little to address control over food production and distribution (Coté, 2016). Beneath the illusion of a 'halo,' this secondary market functions within a dependency model shaped by a highly uneven and unjust global capitalist economy (Claeys et al., 2021). Scholars McEntee and Naumova critique market-based solutions, which result in "continual scarcity and the establishment of a system that reinforces the idea that healthy food is a privilege, only accessible to those with adequate financial and social capital"[51] (2012, p. 249).

Data gathered by Alberta Health Services (2017) shows that one in every ten Albertan households is food insecure. Community Liaison Supervisor of the Calgary Food Bank, Michelle Vetland, is acutely aware of the complexities of the food system, and emphasizes how providing food is not going to solve food insecurity. The Food Bank is one of the largest food distribution hubs in Calgary for people experiencing food insecurity. Their emergency food hamper program distributes over 650 hampers to individuals and families daily, each hamper providing seven days worth of food. The Calgary Food Bank also provides food to other community organizations so they can focus their resources in other capacities. "Emergency food provision services should be

[51] For more on social capital, see Moore and Kawachi (2017), Putnam (2000), Schuller et al. (2000), Portes (1998), and Harriss (1997).

for emergencies, not something that folks need to rely on day to day," Michelle states. "To me, the ultimate goal is not food provision but ensuring that people have the money and resources to access the food that they need." From this standpoint, Michelle works towards strengthening the Calgary Food Bank's relationships with other social services so that the efforts within the food sector are more coordinated and collaborative. She also advocates for better policy, increased public awareness about the ongoing state of food insecurity, and the understanding that people have unique experiences with food insecurity.

I agree with agrarian scholars Jesse McEntee and Elena Naumova (2012) that more pathways of collaboration should exist between emergency food systems and local food movements. Some YYC Food Collaborative members, however, do not see local food as a relevant issue relative to emergency food provision. "I don't think local food is the answer to this [food insecurity], just given how global the food system is," shares a member. "Local food is difficult because it often comes with the connotation that it's more expensive; something that is available for people with more means. Concerns come up around devaluing local products, as producers have their financial interests to consider." A few members correlate local food production to food sovereignty, with individual producers having control and agency within the production and distribution of their food.

> "I definitely think that [food sovereignty] is a noble cause," one member says, "but it's something not a lot of our organizations are involved with just because the immediate need is so great. It's hard to move beyond, say, even hunger and immediate food provision into food security. Folks also need to have access to food that meets their cultural or medical dietary needs, or simply preference. We struggle to even do that sometimes, let alone add in the part of food being sustainably produced and locally accessed."

These sentiments are valid, especially while there is currently no large-scale and effective alternative. Nevertheless, they do not take into account issues of land-grabbing, farm consolidation, volatility in supply-chains, and loss of grassroots control over land, water, and

seeds around the world and in our backyards (Claeys et al., 2021). While some scholars argue that the responsibility and solution for food security should be placed on public subsidies and major policy change (Guthman et al., 2006), others are skeptical of policy's potential for transforming the food system (Clapp & Moseley, 2020). This was observed during COVID-19, when citizens faced compounding barriers to accessing food, including job loss and income uncertainty, the health risk of public transportation, physical and mental well-being. Moreover, disruptions in global food supply chains led to food shortages as international trade, transportation, and business operations were negatively impacted. The response from the Government of Canada, however, was to allocate CAD $100 million to national food banking initiatives through their Emergency Food Security Fund (Lambert, 2021), effectively reaffirming the global corporate food regime.

Food Resilience and Rescue

Expanding beyond food access, the term food resilience examines the intersectional factors and systems that contribute to and mitigate food insecurity (Walker & Salt, 2006). The term resilience is defined as the ability of a social or ecological system to cope with a crisis or quickly recover from difficulties while maintaining its organizational structure and productivity (Altiere et al., 2015). Food resilience, in particular, is the "capacity over time of a food system and its units at multiple levels, to provide sufficient, appropriate and accessible food to all, in the face of various and even unforeseen disturbances" (Tendall et al., 2015, p. 19). Through an agroecological lens, food resilience underscores farmers' potential for adaptation in times of uncertainty and economic change, particularly through the application of ecological principles in farm system design (Francis et al., 2011).

According to Danielle Tendall and colleagues (2015), there are three points of entry for a whole food system resilience building process, including national or regional food systems, food value chains, and individuals' perspectives in the value chain; all must be integrated. In Calgary, the spike in food insecurity during COVID-19 catalyzed the creation of the City of Calgary Food Resilience Team. At first, individuals, organizations, food-related services providers, community advocates, and systems leaders working on food insecurity in the Calgary region came together as a networking communication space. The objective was to share resources and opportunities during the pandemic through a monthly COVID-19 and Food Insecurity e-newsletter, Calgary COVID-19 Community Food Resources by Quadrant database, and Calgary COVID-19 Community Food Map.[52] The map illuminates the city's food response landscape, including concentrations of demand for food pantries, hampers, food bank referrals, free and low-cost meals, and affordable mobile markets. This map has been accessed primarily by the organizations helping to support individuals navigating food resources. One challenge is keeping the map up-to-date on who is providing what because staffing, resources, and capacities of the various organizations change overtime. The Calgary Food Bank, for instance, experienced wait times of up to fourteen days in early 2023 due to inflation and the heightened demand for food. So even if individuals utilize the technology to find resources, they can still be stuck at a dead-end.

The group has now evolved into the YYC Food Collaborative. During monthly meetings, its members work on creating action items to improve immediate food needs with dignity while addressing the root causes of food insecurity. In 2022, the group developed a small social media campaign to increase awareness around multifaceted insecurities faced by Calgarians. One of their short-term objectives is to develop a plan to work more collectively during emergencies to

[52] www.tinyurl.com/covidfoodyyc

ensure food is accessible and available in a timely manner. This will be through the creation of a central platform with coordinated information and contacts. Franco Savoia, a Rotarian and volunteer with the faith-based Society of Saint Vincent de Paul, speaks to the lack of coordination and integration among providers.

> "At the Rotary, we've been working with the group Technology Helps for a few years to see if we can develop an app that can respond to the need for greater coordination, data collection, and information-sharing. We [providers] all have data, but what would it look like if we brought it together and could look at it in real time, today, not in a report a year or two from now? We recognize that there is a digital divide in our community, province, and country; not everyone has a smartphone. So, it's still in a conceptual phase. It's not the final solution, but part of a solution."

Aside from the recognized need for more communication and collaboration between providers and increased public education, City of Calgary Community Social Worker and co-facilitator of the YYC Food Collaborative, Twyla Moon, argues that "we need to challenge the existing narrative focused on food donations. Food insecurity is not a food issue, it's an income issue. We recognize that we need a sustainable and dignified food model for Calgary, and that requires a completely new way of looking at how we do things." Echoed by Executive Director of The Leftovers Foundation Edmonton and board member of Food Banks Alberta,[53] Cory Rianson, "the problem is not a food access network, but the resources to participate in that mechanism." A number of members from the Collaborative advocate for the implementation of Universal Basic Income (UBI), gift cards that provide more choice, alternative models of distribution that decommodify food (e.g., pay what you want markets), an increased focus on post-secondary student food insecurity, and more strengths-based research on systems approaches.

[53] https://rescuefood.ca/; https://foodbanksalberta.ca/

"In whatever we do, let's try to make sure that the live experience is in the room all of the time," Franco advocates. "Years ago when I was working with Vibrant Communities Calgary, the people who are in and out of poverty or homelessness would say, ask us, for God's sake! We're the experts. Don't create solutions *for* us, thinking around what we think we need." For Sue, a 71 year-old diabetic on fixed income, "bills need to be paid before eating food, let alone organic." Sue is a member of Last Chance Produce, a non-profit organization in Calgary housed under The Leftovers Foundation. The group was created in 2021 by Sherry Nolan to help those in need access free, organic produce. With over 800 members and a motto of "dignity, honesty, trust, and respect," this volunteer-run group redistributes food "waste" from Discovery Organics, an independently owned Canadian distributor of Certified Organic and Fair Trade produce. The majority of fruits and vegetables are supplied from farms along the Pacific Coast down to Mexico and South America, with a few suppliers in British Columbia.[54] The produce is primarily distributed wholesale to grocers (e.g., Save on Foods, Blush Lane, Calgary Co-op). Without a salvage program in place due to its nascency in Alberta, any produce deemed unsellable would initially go into the city's compost bins.

Landon Grams, a YAA alumnus and former employee of Discovery Organics, first began redirecting the food to Sara and Oscar in Greater Forest Lawn, who he met during an urban farm tour I coordinated with the Young Agrarians in 2021. When the couple could not keep up with the quantity of produce, Sara introduced Landon to her neighbour Sherry, who she met years ago while volunteering at The Alex Community Food Centre. For a little over two years, before moving to B.C. to farm, Landon delivered produce–often filled to the ceiling of his SUV–from the warehouse to Last Chance Produce once a week. Volunteers sort the fruits and vegetables, toss anything that is too far gone, and redistribute them. The group also receives food donations

[54] For Discovery Organic's full list of growers, see: https://www.discoveryorganics.ca/growers-listing

from Cobs Bread Bakery and Safeway, and members offer to drive hampers to those unable to pick one up. For Sue, this grassroots network offers mental and financial help. “I have been to other places giving away fruits and vegetables and they look like they’re ready to be thrown away! Coming here once a week is dependable; I save about $250 per month on groceries. But the ultimate responsibility shouldn’t be on the consumer.” As one individual, Landon reflects, “I rescue as much food as I can in only one warehouse. From what I can measure, I rescue about 1,000 lbs. of produce per week, or over 20 tons per year.”

These emergency networks are vital in meeting immediate food needs and are increasingly in demand as the cost of living continues to rise. Nevertheless, if the food access-security framework does not situate itself within historical processes of colonialism, neoliberalism, structural racism, land rights, gender and class oppression, and welfare ideology, then it will inevitably reinforce these processes (Alkon & Norgaard, 2009; Slocum, 2006). Furthermore, even terms such as food resilience have become overly saturated and co-opted; Kate D. Derickson (2016) posits resourcefulness as a better framework. However, decolonial scholars are critical of resourcefulness, as the external colonial origins of “resources” reduces Natural gifts and peoples to extractable entities (Kimmerer, 2024; Tuck & Yang, 2012). Within food rescue and emergency food system discourse, McEntee and Naumova (2012) call for a reduced reliance upon corporate waste simultaneous to a resurgence of cooperative models based on community need and communal benefits. Such a model of localism would draw on collective sources (i.e., knowledge and skills in food production, access to land and water, tools, etc.), thereby enhancing the range of livelihood strategies for both urban and rural populations.

Echoed by Eric Holt-Giménez and Yi Wang (2011), local efforts must be receptive to racial and economic diversity, as well as alliance-formation across social groups and movements.

While efforts for food access, security, and justice do not necessarily lead to food sovereignty, food sovereignty has the potential to increase food resilience, address food inequalities, and instill food democracy, depending on the social context and counter approaches to neoliberalism (Guthman, 2008; Mares & Alkon 2011). Addressing more than "how do we get enough," the concept of relational foodways extends into how we can sustainably and *justly* co-generate the materials we require to fulfil our collective needs now and for generations to come.

Intersectional Approaches

Food Justice, Right to Food and Food Democracy

Food justice contextualizes healthy, affordable, culturally appropriate food in structural racism, racial geographies, and sustainable agriculture (Alkon & Norgaard, 2009; Kato, 2013). With roots in the environmental justice movement and diet-related diseases of working-class communities of colour (Holt-Giménez & Shattuck, 2011), there are now activist-scholars, practitioners, and organizations around the world engaging in food justice with the objective to dismantle uneven power dynamics in food systems (McEntee & Naumova, 2012; Reynolds et al., 2018). While anti-poverty discourse among emergency food systems portrays hunger as an issue of poverty–to which the solution is adequate income, a strong social safety net, and integration into the market (Levkoe, 2006)–food justice understands hunger as a direct result of unequal political and economic power, and argues that food should be a basic necessity for all.

Reorienting the needs-based approach of food access-security to one of empowerment, a central objective in food justice is supporting and building the capacity of marginalized communities through platforms of knowledge mobilization and social justice frameworks determined by the communities themselves (Calhoun, 2008). These often integrate social and

environmental goals while advocating for the right to food and food democracy. In a rights-based food system, the social rights within a democracy would include the ability for every citizen to feed themselves (Levkoe, 2006). Molly Anderson critiques how "achieving important human rights has become conflated with other goals of food system reform…such as being community-based, local, and sustainable" (2008, p. 593). Rather than fulfilling human rights, neoliberal agendas of North American government policies have co-opted these buzzwords to support land consolidation, commodity cropping, and industrial livestock.

Anderson (2008) and fellow agrarian scholars argue for food rights and democratic participation to become embedded in everyday political and social expectations (Cadieux & Slocum, 2015; Hassanein, 2003). Henk Renting, Markus Schermer, and Adanella Rossi (2012) refer to this as "food citizenship," where civil society actively engages in reshaping relationships between food practices, markets, and public institutions beyond material and economic exchange. The process of creating more participatory landscapes is necessitated by agricultural literacy, referred to by Laura Saldivar and Marianne Krasny (2004) as "civic agriculture." Charles Levkoe (2006) asserts how participation can be a powerful site for transformative learning and action, at both the individual and collective levels. While social infrastructure–the governance structures and relationships among food system actors (Connelly & Beckie, 2016)–is integral to the sustainability of local food initiatives, Haroon Akram-Lodhi (2013) argues that the State must play a central role to achieve "agrarian sovereignty." Federal, provincial, and municipal policies must be aligned with civic participation to ensure food is treated as a public good guaranteed as a basic right of citizenship. This is especially important where participation is limited by the complex power dynamics within food system governance (Laforge et al.,

2020), as well as the time-intensive nature of grassroots mobilization. Thus, systemic change is required.

The Role of Pluriactivity

The question of time is also in contradiction with Goal Indicator 2.3 laid out in the 2030 Agenda for Sustainable Development,[55] 'End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.' Its objective is to:

> "double the agricultural productivity and incomes of small-scale food producers [by 2030], in particular women, Indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment."

The computational method for assessing this target includes an analysis of the physical volume of agricultural goods sold by the small-scale food producer in a given year, the constant sale price received by the small-scale food producer for the agricultural product during that year, the number of labour days used by the small-scale food producer during the year, and the number of small-scale food producers. One shortfall within this assessment–in a Canadian context–is the reliance on off-farm employment within a 'sustainable' agricultural model. Referred to as pluriactivity, farmers worldwide have almost always diversified their income sources by engaging in multiple activities beyond traditional agriculture (Barrett et al., 2001; Moumenihelali et al., 2023). This trend, which includes off- and on-farm employment, reflects economic, social, and environmental pressures that have shaped rural livelihoods over time. Pluriactivity has evolved in response to changing market demands, technological advancements, and rural-urban economic disparities, offering a means for farmers to supplement income, reduce financial risks, and stabilize their economic conditions (Hansson et al., 2013; Ullah & Shivakoti, 2014).

[55] The 2030 Agenda for Sustainable Development is a commitment to eradicate poverty and achieve sustainable development by 2030 globally. https://unstats.un.org/sdgs/metadata/files/Metadata-02-03-01.pdf.

Fluctuating crop prices, limited agricultural land, the seasonal nature of farming, and climate change also contribute to the need for alternative income sources.

Across the Global South, the phenomenon is not new; farmers have long relied on seasonal work, artisan crafts, and small businesses as secondary income sources (Igwe et al., 2020; Reardon et al., 2001). As farming has become more industrialized, and as the costs associated with farming have grown, pluriactivity has become more critical worldwide for economic sustainability. Over time, its significance has been especially pronounced in periods of economic downturn. In the 1980s, for example, when agricultural prices collapsed globally, many farmers in the U.S. and Europe relied on off-farm employment to maintain their livelihoods (Barnett, 2000). This pattern has been mirrored in other regions during economic crises, such as the Asian financial crisis in the 1990s, which forced many Southeast Asian farmers to find supplementary income sources (Panahi, 2016). Throughout the twentieth century, pluriactivity expanded significantly in response to two main drivers: globalization and urbanization. Global agricultural markets introduced heightened competition, which exposed farmers to unpredictable income streams. Urban migration offered employment opportunities that, while creating labour shortages in rural areas, encouraged remaining farmers to seek additional income sources.

Now, nearly half of Canadian farm operators report off-farm employment and other incomes[56] (Qualman and the NFU, 2019). Farmers often engage in service industry jobs, such as hospitality, retail, or seasonal labour, which offer steadier income compared to the seasonal variability of crop or livestock production. Informal work and local trade, such as construction or transportation, is another option that can provide immediate but irregular income. For Sarah

[56] In the 2015 Census of Agriculture, 16% of farm operators in Alberta reported, on average, 30 to 40 hours per week of paid non-farm work (Statistics Canada, 2018). I was unable to find data to reflect more recent trends.

Riedner of HBTA, “we do have some off-farm investments that help us financially, but we would like to get to the point where the farm makes enough money for us to live off it. Then, our time wouldn’t be so stretched running here and there.” To Lyle Weigum of Winter’s Turkeys Farm,

> “An off-farm job is social and economic security, but comes with an expense of time. It can also be difficult with weather events where you need to leave the office to get your animals inside, or during intense seasons like turkey loading. When I was teaching, we had dental insurance, eye coverage, and health care. We also still had a good barter system with our local dentist who accepted turkey in exchange for dental work. But if you have a family where everybody needs braces and glasses, you can’t always have a side hustle worked out with animals. Or if you’re a grain farmer, those are cash crops and your options are limited. Growing up on a grain farm, my mom’s side hustle was sewing drapes. It was necessary income early on, but when the farm got bigger, she was needed there. While dad was busy planting, mom had to load out the grain. Every farm has to make that call, “if we get a bit bigger, we can do it.” But as you get larger, your costs also increase. We’re very lucky that both Laurel and I can be here on the farm, and that there’s enough to go around.”

Farmers also diversify their streams of income on the farm through handicraft activities, agritourism (i.e., farm tours, bed-and-breakfast services, product sampling experiences, livestock events, etc.), and most recently, digital engagement vis-à-vis platforms and professional services (Shakhovskoy et al., 2021). For instance, some farmers have created online businesses or offered consultation on sustainable farming practices to leverage their expertise in agriculture. Through social media and online marketplace, farmers can reach broader audiences and sell value-added products while also offering subscription-based programs. This shift reflects broader trends in both rural entrepreneurship and consumer interest in locally sourced or artisanal goods (Beingessner & Fletcher, 2020; Feldmann & Hamm, 2015). Online sales, direct-to-consumer channels, and e-commerce platforms have opened up opportunities for farmers to expand income streams without leaving their agricultural roots.

The impact of pluriactivity extends beyond income diversification. Economically, it stabilizes rural incomes, encouraging more people to stay in rural areas and reducing the need for

urban migration. This diversification helps build more resilient rural communities by making them less dependent on agriculture alone. Socially, pluriactivity has changed the roles within farming families, with women and younger generations often engaging in off-farm employment or starting small businesses, thereby increasing their household economic contribution (but not necessarily their household power or financial independence) (Evans & Ilbery, 2008; Rola-Rubzen et al., 2023; Xie et al., 2022). However, pluriactivity also presents challenges. Balancing multiple income sources can create time constraints, reducing the focus and attention farmers can dedicate to agricultural activities. In some cases, increased off-farm work results in labour shortages for on-farm activities, pressuring farmers to adopt labour-saving technologies or hire seasonal workers.

As small-scale farmers, my husband and I can attest that running a regenerative operation is laborious, time-consuming work that leaves us exhausted by the end of the day. He also works full-time with the City of Calgary's Parks Department, and I am a full-time student and sessional instructor at the University of Calgary. We need these other streams of income to not only cover living expenses but to have better access to healthcare and retirement plans. It is not sustainable to expect farmers to take on two or three jobs in order to stay afloat. Rather, small-scale growers should be better supported by policy to diversify their streams of income on-farm so that they can uphold economic viability, ecological sustainability, and social responsibility, and in doing so, reduce injustices of food inequality. Additionally, the role of communal social organization is key to sustainable pluriactivity, particularly as rural communities–and their interconnected social and economic structures that support individual households–decline.

A framework of relational foodways aligns with the arguments of food justice, the right to food, and food democracy in acknowledging that the restructuring of food systems requires a

dismantling of racial hierarchies, class and gender divisions, environmental implications, and asymmetrical governance. As I will discuss, communal social organization plays an integral role in sustainable pluriactivity and the creation of more just food systems for both consumers and producers. Furthermore, it is a core component of the theory and practice of relational foodways. Next, I detail the thematic areas of this guiding framework and articulate its political and analytical utility for food system transformation.

Relational Foodways

In recent years, Food Studies scholars have increasingly looked toward complex and multi-dimensional frameworks to analyze the intersections between farming, food systems, and society. To contribute to the discourse and provide a structural analytical framework for my research, the seeds of *relational foodways* were sown in the soil of this work. Similar to agroecology, which combines traditional farmers' knowledge with agronomic, ecological, and social sciences (Altiere, 2015), relational foodways is a transdisciplinary approach that pulls nutrients from Critical Agrarian Studies, Socio-cultural Anthropology, and Decolonial Studies. While co-conceptualizing my research proposal with key counterparts Sara and Oscar, we kept circling back to relational ontology, a perspective that challenges the concept of autonomous entities and instead suggests that entities are constituted through their relationships with each other (Mignolo & Walsh, 2018). Relational ontology posits that humans, non-human or more-than-human animals, plants, the land, waterways, and ecological processes are interconnected and dynamically co-create each other through continuous interactions. Thus, we knew that the questions, methodology, and reflections of my research must be guided by a relational conception of place (DeLind, 2006).

RELATIONAL FOODWAYS
POLITICAL RELATIONS
Equitable representation and governance for food systems.
Access to Resources
Advocates for fair access to land and waterways.
Indigenous Knowledges
Incorporates traditional ecological knowledge into modern food practices.
Democratic Governance
Promotes community involvement in decision-making processes.
Seed Sovereignty
Ensures communities control their seeds and agricultural practices.
ECOLOGICAL RELATIONS
Importance of ecological balance in food production.
Natural Cycles
Encourages knowledge and respect for ecological processes.
Interconnectivity
Understands the reciprocal relationships among humans, animals, and plants.
Ecosystem Health
Recognizes the importance of biodiversity in food sustainability.
Land Stewardship
Promotes responsible management of land and water resources.
CULTURAL - SPIRITUAL RELATIONS
Honors the spiritual connection to land, nature, and food.
Sacred Relationships
Views the land and food as living entities deserving respect and care.
Community Well-being
Promotes collective health through diverse food practices and knowledge.
Cultural Celebrations
Encourages community gatherings that honor food and culture.
Intercultural Dialogue
Promotes knowledge sharing across cultures and generations.
SOCIO-ECONOMIC RELATIONS
Economic viability of sustainable food procurement and distribution.
Economic Diversity
Embraces diverse economic models in food production and distribution.
Local Circular Economies
Strengthens local economies through supportive food networks and systems.
Cooperative Practices
Supports communal efforts in food production and distribution.
Beyond Agriculture
Encourages various methods of sustenance beyond farming.
GENDERED RELATIONS
Gender equity in food production and consumption.
Empowerment
Encourages women's participation in decision-making in food systems.
Knowledge Exchange
Fosters intergenerational knowledge about food and community practices.
Cultural Gender Norms
Acknowledges diverse cultural norms and roles related to food.

Dr. Vanessa Watts (2013), who is Mohawk (Bear Clan, Six Nations) and Anishinaabe, expresses the relatedness of humans and non-humans who derive their agency, or sovereign spirit (Absolon & Willet, 2004), through the extension of "place-thoughts" of the land. Place- and culturally-specific Indigenous ontologies and food systems are deeply embedded in reciprocal relationships with the land, where processes of food production, harvesting, and consumption are seen as part of a broader network of relations that sustain community health and environmental well-being (Absolon, 2011; Adese, 2014; Aldern & Goode, 2014; Hermes et al., 2012). This viewpoint contrasts with colonial-capitalist manifestations (i.e., industrialized food systems) that

separate human and non-human interactions and prioritize economic gain over ecological and social resilience. While being cautious not to imply relationality as multiculturalism or open-ended inclusion (Mignolo & Walsh, 2018), using relationality as an analytical lens allows all people to understand modern food systems in a way that honours diverse knowledges, values cultural diversity, encompasses economic dimensions, and promotes ecological harmony.

While the aforementioned residual and intersectional approaches to food system transformation focus on foodstuffs or agricultural production itself, relational foodways as a framework aligns more closely (but not explicitly, as explained earlier in the chapter) with the decolonial approach of food sovereignty. For one, the procurement of sustenance goes beyond agriculture to include fishing, hunting, trapping, pastoral grazing, and foraging for meats, berries, nuts, fungi, wild tubers, and medicines. If plants and animals are domesticated, they are tended *in a good way*, meaning with respect, dignity, and gratitude. For instance, regenerative farming that is guided by relational foodways honours the spirit of the plants and animals being cared for (Caradonna & Apffel-Marglin, 2017). Cover crops are understood as medicine for the soil and the eggs of each laying hen as gifts. Most if not all parts of the animal are used; from tanning hides to drying sinew. In relational foodways, one does not only engage their mind intellectually, but also their physical being, emotional self, and spiritual energy (Betasamosake, 2014). Harvesting, for instance, does not have to be understood as a one-sided extraction, but an opportunity to deepen a relationship with the land.

While both relational foodways and food sovereignty challenge corporate agri-food monopolies, advocate for equitable access to land, water, and seeds, and push for the redistribution of power, relational foodways do so with an awareness of positionality. This approach acknowledges that Indigenous communities have long practiced sustainable food

systems—centuries before these were categorized as ‘regenerative’ or ‘agroecological’—but it does not seek to subsume Indigenous-led movements within a broader sovereignty-based analysis. Instead, relational foodways recognize that Indigenous food systems are inherently tied to self-determination, kinship relations, and governance structures that predate and exist outside of settler-colonial food policies. Unlike food sovereignty, which explicitly foregrounds Indigenous land restitution and political self-determination as necessary conditions for food justice, relational foodways operate as an analytical and political movement that supports these efforts without claiming to lead them. This framework is particularly important for non-Indigenous scholars and activists, as it offers a way to engage in food justice work without appropriating or directing Indigenous-led movements. The strength of relational foodways lies in its ability to challenge systemic inequities—such as corporate monopolies over food and resources—while ensuring that food sovereignty remains a distinct, self-determined project led by Indigenous communities themselves.

Throughout this research, my collaborators articulated their own understandings and practices of relational foodways, demonstrating how it can function as a complementary yet distinct framework that advances equity and justice in food systems while respecting Indigenous autonomy. Within a holistic ecosystems approach, many began by describing relationality in terms of our relationships to and interacts with the land, water, sky, and one another. That the Earth is a sacred other, rather than ‘an Other’ or ‘thing’ to dominate. Similarly, that we are a piece of the system, not in control of it, where the ecology extends beyond the borders of a section, quarter, or acre. Creeks flow from one neighbour’s property into another, eventually into the rivers. Birds migrate, deer forage, and voles tunnel from one coulee to the next. Our decisions, therefore, impact those downstream and those residing alongside us. When farming

under the current land title system, small-scale farmers can design their grazing rotations and seeded crops to take into account the behaviours and needs of wild flora and fauna. Kolby shares her understanding of relational foodways and regenerative agriculture:

> "Somebody once shared with me 'it is important to recognize and acknowledge and therefore be responsible for our consequentiality.' Everything that we do, the choices we make, how we choose to meet our needs, it leaves an imprint. The responsibility part comes in when thinking about what kind of imprint we want to leave, and how that might affect everything and everyone else (living or nonliving). It has been a huge driver for me; to leave an imprint that is more diverse, beautiful, and inclusive. To have beauty because I was there, not a scar."
>
> She goes on. "It's like a language. Human beings are infants in our fluency of this language, especially as it relates to the land, earth, sky, and water; the parts of the earth that directly keep us alive. And all of the relationships outside of that, which are infinite. It's a scope, I can zoom in and think about how I myself as a human being am relating and engaging in relationships with, and trying to seek understanding in my language and how I'm sharing language with other things that don't speak English. Scaling out is a little harder for me to do because there isn't the sense of empowerment, control, or ability to influence on a large scale. But it is so necessary as the human species is in relationship with everything else. Because I do this yo-yo of micro and macro, a lot of the decisions I've made in how I choose to live my life and engage with other humans is because I have direct influence over planting a garden every year and raising life and taking direct participation in the cultivation of life and my relationship with that life and death."

In a social sense, research participants widely characterized relational foodways as collaborative, cooperative or communal, supportive, flexible, and transparent. Specifically, collaborations and conversations between individuals, other organizations, sectors, and municipal governments; cooperative purchasing, marketing, and distributing; collective land and equipment ownership; and growing food in a communal way to share amongst one another, sell to an AFN, or donate to food access programs. Communities grown around relational foodways encourage and hear the creative ideas of all involved, promote collective empowerment and distributed decision-making, honour diversity while building relationships across our differences,

and awaken the music, poetry, and celebration of what it means to be human. Darrel Winter speaks to these social relations:

> "We used to have an arrangement with the local dentist—dental work in exchange for turkey! There were plenty of other small trades, too. Sometimes, we'd pay part of a project bill with turkey meat. Borrowing the neighbour's stock trailer? The payment was turkey. Hauling a load of bales? That cost us a few turkeys. Even the barn addition—we got a discount in exchange for some turkeys. And when we bought a tractor from the next-door neighbor, the deal was sealed only if he agreed to buy five turkeys a year for three years. Bartering was a great way to pay, but we don't do it much anymore."

Central to relational foodways is a deeper understanding, respect, and attunement to natural cycles and phenology; learning what grows where, at what times of year, and under what optimal conditions. Counterparts described this aspect of relational foodways as a more gentle, interconnected way of being that is not as draining, but fills us with awe as we come to reknow Nature as filled with abundance. "Among soil farmers, something has turned on; there is a renewed sense of wonder," shares Rod, "they (we) have this connection to the Earth…to the land. A lot of our disembodiment is our disconnect; that we aren't in that connection. Abundance *is* there…we just have to open our eyes to it." Farmers see this bounty when one seed potato produces eight to ten more potatoes, or when one hen lays 200 eggs in a year. This is not to equate abundance with productivity or maximizing yields. Abundant life is often balanced with suffering, death, and decomposition for renewal. These aspects of the natural world are often taboo in discourse as notions of sustainability are romanticized with images of living in harmony with everything around us. Where every*being* thrives all the time. Lyle contemplates this notion:

> "We can talk about the sacrifice that is agriculture. Our turkeys make a pretty big sacrifice. Bees work incredibly hard to make honey that we take from them. We need to recognize that food is not, has never been, and will never be free. Even if you grow food in your garden, it's the sacrifice of your time and effort that you could have placed elsewhere or for another stream of income."

These sentiments also ring true when considering concepts such as affordability, mechanization, and labour conditions, as the costs of producing food must be incurred somewhere and by someone. In Raj Patel's book, *The Value of Nothing: how to reshape market society and redefine democracy* (2009), he critiques the global capitalist system by focusing on how markets and economic ideologies distort our understanding of value and the functioning of society. Patel challenges prevailing economic assumptions, particularly those associated with neoliberalism, and argues for a more equitable and sustainable approach to value creation. One of his central arguments is that capitalism reduces everything–human labour, natural resources, and even culture–to commodities that can be bought and sold in markets. In doing so, it creates a situation where things that should not be commodified, like public goods or essential services, are treated as if they have intrinsic market value. This commodification leads to the erosion of social and environmental goods and ultimately fosters inequality. Patel highlights how the price mechanism in capitalist societies fails to account for the real value of human and ecological well-being. Another contention is how markets are not natural or "free" but are heavily shaped by power structures and governmental intervention. He critiques the idea of "free markets" as an ideological construct, pointing out that markets have always been subject to regulation, subsidies, and corporate influence. In fact, markets often benefit the wealthy and powerful, while small farmers, workers, and marginalized groups bear the brunt of exploitation.

Critical agrarian scholars, including Patel, are thus calling for a radical rethinking of how society defines and distributes value. How can our economic systems centre on environmental sustainability, community, and social well-being? Instead of relying on markets to allocate resources, scholars propose a system of democratic control over essential services and resources, where decisions are made not based on profit but on their value to society as a whole. Such

community-based economies, cooperative models, and collective action have the potential to transform food systems and challenge the dominance of corporate capitalist structures. While it may be difficult to fully decommodify a food system in the world's economic reality, relational foodways advocate for equitable representation in food politics, access to and stewardship of land and waterways, and democratic governance over what and how food is grown and consumed. Thus, relational foodways are also considered a pathway for political education and social organization (Klinke & Samar, 2021a). Dani Chappelle, a founding member of Mountain View Growers, reflects:

> "I didn't grow up with a family connection to the land—low-income, an abusive childhood. The garden became my refuge, and I became drawn to how food systems shape culture. Struggling with addiction, I worked on an organic farm in Ontario and sobered up. Losing family during my gender transition, I moved to Alberta, hiding who I was. But at Olds College, conversing with Indigenous women about their connection to this land made me realize—this is where I'm meant to be, to care for this place, even if I fail sometimes. Being a caretaker is not something that I have a right to claim, but deeper down, I do feel this responsibility." Dani goes on:
>
> "Farming is a struggle, especially without generational wealth. Everybody who is trying to make a first go at farming is having a hard time. Most successful farms are inherited, passed down to sons. Starting from nothing, I've had to rely on experience, resilience, and collective effort. Now, with others at HBTA, we're making it work—because doing it alone isn't possible. Food, like land, is about relationships."

Whether people are gathering for larger farm tasks, making and delivering home cooked meals for those facing hardships, bartering goods for services, or diverting food from the landfill, the work within relational foodways is made regenerative so that individuals and communities are also regenerated. Integral to this simultaneous occurrence is meeting one another where we are (i.e., our capacities, knowledges, and limitations), as well as highlighting the connections among locally resilient hubs within broader global networks.

Social organization plays a critical role in shaping foodways, influencing everything from who has access to nutritious food to how cultural identities are preserved or transformed through food. Through its impact on food access, economic structures, cultural identity, and social interactions, social organization affects both individual food choices and collective food practices. As society becomes increasingly aware of issues like food security, sustainability, and cultural preservation, the role of social organization in foodways will continue to evolve, highlighting the importance of considering social structures in creating more equitable and sustainable food systems. Social organization is, therefore, not just a backdrop to foodways but a dynamic force that actively shapes how food is grown, distributed, consumed, and valued. Understanding this relationship offers insight into broader societal issues and helps inform policies and practices that can foster healthier, more inclusive, and sustainable food systems for future generations.

Political and Analytical Utility

In the context of research on farming and food systems, a relational foodways framework can reveal how various factors–economic policies, cultural practices, ecological changes, and technological innovations–interact within food systems. By focusing on relationships rather than isolated components, researchers can analyze how policies affect not only individual farmers but also their communities, ecosystems, and food supply chains. The relational foodways approach is particularly useful for investigating the impacts of industrial agriculture, where monoculture practices, heavy pesticide use, and soil degradation have disrupted local ecosystems and strained farmer livelihoods. By examining the interrelations among soil health, crop diversity, farmer knowledge, and community well-being, researchers can uncover patterns that might otherwise be overlooked in a more compartmentalized analysis. For example, relational foodways can help

trace the impacts of monocultures on soil biodiversity, linking these ecological shifts to broader social outcomes like food insecurity, loss of local agricultural knowledge, and reduced community resilience.

Relational foodways also provide a valuable framework for examining local and sustainable food movements, which emphasize reconnection with local lands and the adoption of ecologically sound practices. These movements, often represented by biodynamic or permaculture farming, prioritize biodiversity, cultural sustainability, and community-centered economies. A relational perspective allows for analysis of how these movements cultivate stronger ties between consumers, farmers, and the land, as well as how these relationships can contribute to social and ecological resilience. Researchers can analyze how these food movements build community networks that foster environmental stewardship, promote sustainable livelihoods, and empower communities to have greater agency over their food systems.

Food policies and governance structures, such as subsidies, land-use policies, and trade regulations, shape food systems in ways that affect local and global farming practices. A relational foodways framework enables researchers to examine how these policies create ripple effects that impact not only individual farmers but also the broader ecosystem. For instance, policies that incentivize large-scale monoculture farming can lead to environmental degradation, which, in turn, affects public health, water quality, and food security. By tracing these interconnected consequences, researchers can identify policy interventions that support sustainable farming and food security at local and global levels.

Relational foodways as an analytical framework holds significant potential for addressing the contemporary challenges facing farming and food systems, such as climate change, food

insecurity, and the marginalization of small-scale farmers. Climate change, for instance, has complex implications for agriculture, altering growing seasons, reducing water availability, and increasing the frequency of extreme weather events. A relational foodways framework enables researchers to analyze how these environmental changes intersect with socio-economic factors, such as market volatility and land access, to create compounded challenges for farmers. This holistic perspective is crucial for identifying adaptive strategies that account for both ecological and social dimensions of resilience.

Furthermore, relational foodways can address food insecurity by investigating how social networks, cultural practices, and ecological relationships influence food accessibility and community well-being. For instance, research could explore how traditional agricultural practices rooted in relational foodways might offer more resilient alternatives to industrial farming methods. By understanding food systems as networks of relations rather than isolated transactions, researchers can identify ways to strengthen community food security through local agriculture, knowledge sharing, and culturally meaningful food practices. In the next chapter, I discuss how an analytical framework of relational foodways helped guide my research methodology to answer my research questions.

Chapter 3: Planting Collectively

Applying a relational foodways framework to research on farming and food systems requires methodological approaches that capture complexity and interconnectedness. Qualitative methods, such as ethnography, participatory action research, and case studies, are particularly well-suited for relational foodways research as they allow for in-depth exploration of relationships and provide space for participants to express their perspectives on food-related issues. Immersive ethnography, when complemented by quantitative methods, can provide a holistic understanding of the lived experiences of farmers and their relationships with the land, community, and market forces. Additionally, participatory action research can enable farmers, community members, and other stakeholders to become active participants in the research process. This collaborative approach aligns with the relational foodways perspective, as it emphasizes mutual learning, community engagement, and decolonial approaches to gathering knowledge.

Power Dynamics and Collaboration

Dr. Linda Tuhiwai Smith (2021), a Māori, Ngāti Awa, and Ngāti Porou iwi scholar, brings attention to the colonial roots of research, stressing how researchers need to be critically aware of the roles that knowledge production, hierarchies, and institutions play in processes of de/colonization. With this awareness comes responsibility to build meaningful relationships between researchers and communities, and to foster relational accountability[57] all along the way (Absolon & Willet, 2005). Scholars from across fields of study are increasingly arguing for more collaborative approaches to knowledge-making (Martínez-Alier et al., 2011; Montenegro de Wit et al., 2021). The choice to employ a collaborative, participatory research design, including my

[57] For more on social accountability politics, see Fox (2015).

methodologies, was an intentional act of resistance against the archetypal positioning of an academic as that of an 'outsider' who could provide an 'unbiased, objective' perspective while extracting data for interpretation from 'the field' (Bilgen et al., 2021).

Both the language and location of an etic expert reinforce ethnographic Othering, which is a temporal, historical, and political act (Fabian, 1983). Haitian American academic Michel-Rolph Trouillot (2003) emphasizes that "there is no Other, but multiples of others who are all others for different reasons, in spite of totalizing narratives" (p. 27). Further ways of establishing the Other are what cultural anthropologist Johannes Fabian calls the "schizogenic use of time" and the "denial of coevalness" (1983, p. 21-31), in which Time is conceptualized differently in the field than in the armchair. Throughout both, there is a tendency to place 'informants' in a Time other than the present. In his analysis on the coloniality of power, Peruvian sociologist Aníbal Quijano (2007) critiques the cultural complex of European modernity/rationality wherein the Other is either absent from discourse or if present, is objectified. Values of individualism, dualism, and knowledge-guarding are embedded in colonial ideology and reflected in archetypical Western research theories-practices. The late Standing Rock Sioux activist, Vine Deloria Jr. (1969), challenges academics to dismantle the 'exotic Other,' reject the production of knowledge for knowledge's sake, and re-humanize the anthropologist (Biolsi & Zimmerman, 1997).

Central to the process of decolonization are reciprocal relationships, community collaboration, and a co-production of knowledge (Hermes et al., 2012). In accord with the desires and participation of the community, each step of the research process would be controlled by both the academic and citizen researchers (Absolon & Willet, 2004; Tuhiwai Smith, 2021). Thus, collaborative participatory research was the most appropriate platform from which to

operationalize relational foodways because it involves the distributed knowledge of all partners in the research process. A participatory research process, as emphasized by Kansas University's Center for Community Health and Development (CCHD) (2017, Ch. 36, Section 2),

> "Yields better and more nearly complete and accurate information from the community; creates more visibility for the effort in the community; trains citizen researchers who can turn their skills to other problems as well; can move communities toward positive social change; changes people's perception of themselves and of what they can do; helps people better understand the forces that influence their lives, and; can help to break down racial, ethnic, and class barriers. Involving the community in research is more likely to meet community needs, and community members are more likely to accept the legitimacy of the research and buy into its findings if they know it was conducted by people like themselves."

There is no restriction for who can be involved in a collaborative research design, but generally it includes people most affected by the issue, other members of the affected population, decision-makers, public agency staff, and academics with an interest in the issue. There is also no specific timeline for conducting collaborative research, but the more frequent and lengthy time spent with community counterparts will facilitate participant support, more opportunities for training citizen researchers, a deeper analysis and understanding of the issues at hand, and more potential long-term impacts. It is the community research team, in collaboration with the academic researcher, who determines the issue, structures the research activities, carries out the plan, disseminates the results, evaluates and reflects on the process, and continues this process endogenously.

Arda Bilgen and colleagues (2021) caution that while 'participation' and 'empowerment' have been embraced by mainstream academia, asymmetrical power relations within these spaces and among actors remain dominant. Betasamosake (2014) speaks to these contradictions, reminding us that "while there are sites of decolonization within academic institutions, they still remain a colonizing force upholding the values of heteropatriarchy, settler colonialism and

capitalism" (p. 13). Even "culturally sensitive research" guided by community is still ultimately a Western research archetype (Tuhiwai Smith, 2021), confined within disciplines that narrow the whole forest community to a single tree. Like the concept of 'local', defining 'community' can be challenging given the intersectional threads of class, gender, race, ethnicity, language, education, sexuality, spirituality, and age among any group of people (Montenegro de Wit et al., 2021). Communities are dynamic, woven with multidimensional threads of power, privilege, and knowledge-making that warp and weft social fabrics. Within a given community, members may hold multiple identities, participate in different ways, and hold distinct worldviews, abilities, and intentions. Therefore, the characteristics and goals of a community may also be fluid and heterogeneous, challenging the notion of fixed categories of people, places, and niches.

Scholars conducting food system research could certainly choose to collect data solely from organic farmers or CSA shareholders, seasonal workers, or YYC Food Collaborative members, and so forth. This approach does have its own utility for breaking down complex phenomena into more digestible bites to better understand certain actors, constraints, and actions. However, it can also result in a homogenization of narratives that reduce multidimensional complexities into siloes. I want to make clear that this is not necessarily the case for knowledge-making among culturally- and community-specific Indigenous food systems. To avoid further universalization of a false, singular Indigenous experience, it is important to clarify when research is being contextualized in a Blackfoot, Cree, or Dene foodway, and so forth. Such work would be best led by Blackfoot, Cree, or Dene members themselves, supported by non-Indigenous researchers if and where requested. This brings us back to why relational foodways is an important analytical framework and movement for food system transformation in Canada. It has the potential to bring people together and unite food-related networks. Similar to

Deleuze and Guattari's (1987) metaphor of a rhizome—a mass of underground plant stems that shoot off in different directions—networks[58] illustrate the principles of connection, heterogeneity, and non-hierarchical collective assemblages.

While my work is situated within a much broader network of food movement actors, 50 community members participated in this research. They included small-scale growers, food justice advocates, Indigenous land stewards, academics, municipal policymakers, social agency staff, leaders of grassroots organizations, those impacted by food insecurity, and community members at large. Participants self-identified as women (54%), men (44%), and non-binary (2%); adults (98%) and youth (2%); non-Indigenous/settlers born in Canada (74%), Indigenous (14%), and immigrants (12%); farm operators/producers (56%), gardeners (32%), and social agency or City employees (12%). Of those who grow food as farmers or gardeners, 57% own the land on which they produce food, while 43% lease or informally share land.

Being a member of the community in which I seek knowledge, I have strived to challenge the myth of an unquestioned Western cannon, confront how my discipline is a product of past meta narratives, address my positionality as an academic, and critique institutionalized norms (Trouillot, 2003). Both the process and product of ethnography was undertaken *with* people for their own utilities, as opposed to *of* peoples in physical environments (Fischer, 2018).

Community Mentors

Every step of the research process–including writing a proposal, grants and ethics applications, creating Field of Study reading lists, preparing for Candidacy Examinations, gathering and reflecting on data, and sharing that knowledge to the academic and broader community–were carried out with the guidance of two community mentors or key counterparts, Sara Rodriguez

[58] Agrarian scholars have also used terms such as 'hub' (Blay-Palmer et al., 2013) or 'system' (Cadieux & Slocum, 2015) to describe networks of food actors.

Huenchullan and Oscar Jara (Figure 4). Sara and Oscar are long-time residents of Greater Forest Lawn (GFL), an entrepreneurial and multicultural region of Calgary consisting of multiple neighbourhoods that offer more affordable housing, accessible transit, language centres, and food access services. At the same time, GFL has some of the highest rates of poverty[59] and food insecurity in the city, with a large population of lone parents, renters, racialized minorities, newcomers, and unhoused peoples. But, there is power in solidarity at the margins. Sara and Oscar have not only established relationships among their neighbours, the broader GFL community, and urban growers, but with farmers in the countryside.

Figure Set 4: Community Mentors (Sara, *left*; Oscar & Sara, *right*)

I first met Sara and Oscar in September of 2020, when they invited a group of farm volunteers to their home for dinner before a long night of turkey wrangling. Over a bowl of hearty soup and loaves of homemade bread, we discussed the inequities of capitalism, food regimes, and the importance of social mobilization. As the sun began to set, we made our way east of Calgary to Winter's Turkeys Farm, where we would load toms and hens onto transport trucks until the *madrugada*. Long-time friends of the Winter family, Sara and Oscar came to offer us moral support as we deadlifted birds over our heads and into the cages. Despite the

[59] Data is derived from the 2021 City of Calgary Food Resilience Maps, the City's Open Data resources, 2016 Statistics Canada Census, and a team of social researchers.

bruises, bleeding scrapes, joint aches, and irritated lungs, we felt a sense of accomplishment and camaraderie. “We were so impressed by the work ethic and selflessness Chelsea demonstrated;” says Sara, “while others expected to be paid, Chelsea was genuinely interested in establishing a relationship with the farm and supporting where needed.” Years later, my husband and I still return to help the Winter family load birds. After that first experience, my relationship with Sara and Oscar grew. I began visiting their home on a weekly basis, sharing meals, stories, and critical conversations. Sitting around their kitchen table with steaming cups of tea, Sara and Oscar share,

> “We have a very personal history, and continued reality, with these challenges. Born in what is now Chile, we suffered under Pinochet’s authoritarian military dictatorship. We faced political imprisonment and torture for several years before being liberated by the Canadian Government. I was brought to Calgary in 1975, Oscar in 1977, forbidden to return to Chile until amnesty was granted in 1988. We returned to Chile but continued to face persecution, forcing us to leave our home yet again for Alberta. Upon the second arrival, my granddaughter and I did not have a place to sleep nor food to eat because we did not have any money to bring. Living on the streets for months, we found shelter with Inn From the Cold until I could send money to Oscar to join us. As a Native Mapuche woman, I never gave up; I relied upon my experiences in Mexico and Chile organizing community and growing collective power to rebuild a life for myself and my family.”

The Mapuche people have a rich tradition of sustainable agricultural practices. Many communities use polyculture and intercropping methods, which involve growing multiple crops together in the same space. Their practice of crop rotation prevents soil depletion and reduces disease cycles, while the addition of compost and manure promote healthier plant growth and soil fertility. To manage water resources and maintain soil moisture, the Mapuche use traditional irrigation methods. Through seed exchange networks, the genetic diversity of seeds are preserved, ensuring the availability of resilient crop varieties. The Mapuche people also recognize the ecological and health benefits of medicinal plants, which are incorporated into their farming systems. These practices not only contribute to biodiversity and enhance the sustainability of their agricultural methods, but reflect a deep connection to the land and one

another. “We are now at the end of our life, but we keep fighting for a better world,” remarks Sara. “So the work we are doing at the community level and alongside farmers, and have asked Chelsea to accompany us in doing through her research, is coming from solidarity in resistance to the system” (see Letter of Support in Appendix B).

Cycles of Collaboration

Building off a foundation of transparency, respect, and accountability, my key counterparts and I went through multiple iterations of co-analyzing and co-theorizing while we collaboratively gathered and made meaning of knowledge (Lake & Zitcer, 2012). During these processes, we frequently engaged in cycles of sharing, learning, reviewing, and revising to ensure my dissertation accurately portrayed, acknowledged, and centered the narratives of our collaborators (Montenegro de Wit et al., 2021; Sandover, 2020). In doing so, I was critically attentive when attempting to express the nuances of peoples’ distinct relationships with the land, regenerative cultivation, and community networks, while emphasising that there is no one way of knowing, being, doing, or connecting.

The co-production of knowledge can certainly help to break down racial, class, age, and gender barriers as it works towards social change identified by community members. Nevertheless, there are important contradictions to highlight when engaging in collaborative research and the co-creation of knowledge. For one, most universities still mandate a single-authored dissertation. While other publications can be co-authored with my counterparts, I have had to carefully navigate issues of voice, authority, and power relations in this dissertation. Drawing from the narrative continuum put forth by Robert Lake and Andrew Zitcer (2012), I strive to contextualise dialogic exchanges within a socio-political critique of colonial complexes. Beyond authorship, prestige, and benefits from global capitalism, scholars are also critical about

the potential for ‘solidarity or allyship research’ to produce or reinforce inequalities if attention is not paid to power imbalances and ethics (Gagliano, 2021; Li et al., 2021; Mendez, 2008).

Ethical Considerations

The probability and magnitude of harm or discomfort anticipated in this research were not greater than those ordinarily encountered in daily life; rather, there was minimal risk involved in my research. All CFREB UCalgary ethics documents were approved, carried the UCalgary logo, and provided an accurate description of the activities that participants would be asked to engage in. All participants received a consent form to review and a written summary was provided verbally. I requested participants to verbalize back to me their comprehension of the research goals and process of informed consent to ensure there were no misunderstandings.

Beyond the existing relationships with my collaborators, more participants were able to get involved via snowball sampling, or word of mouth. Those interested in participating in any aspect of this research were able to contact me directly or go to the home of my key counterparts, Sara and Oscar, to learn more. The only exclusion criteria for participants included those unable to independently engage in conversations involving regenerative farming and those under the age of 18, unless assent was provided by the youth’s guardian and the youth. Otherwise, participants were not restricted based on their sex, age, occupation, ethnicity, class, or any other social indicator.

To minimize risk, participants were made aware of activities, questions, and observations in advance, and were given the opportunity to decline participation in any or all research aspects. Additionally, participants could stop the aspect of the research process they were engaging in at any time. I also sought explicit oral consent before audio-taping or taking photographs of people, for which they could decline one or both. If they agreed to be audio-taped, they could request I

stop the recorder at any point during the research activity. Participants could also request that their recording not be used within 90 days after the last official day of fieldwork (August 1, 2024).

If I sensed a level of discomfort among participants, I would change the subject or activity and reassure participants that they could withdraw from the project at any time. I would remind them that they did not have to answer all of the questions or participate in all of the activities. Throughout the research activities, I made check-ins, such as "are you sure it is okay to continue?" In all aspects of the research, participants had the choice to remain known or have their identities anonymized. If they opted for anonymity, they were given the choice to use a fictitious name or remain unknown. The benefits and potential risks of both options were explained, so that each participant could make an informed decision. If a participant chose to remain known, I was sure to review the information gathered with them before making it publicly available. If a participant chose anonymity, I collected the data using code numbers so that the given person's name would not be associated with their responses. Over the course of my Ph.D., I worked alongside my collaborators to design and review my dissertation to ensure they would be accurately portrayed, acknowledged, and to centralize their voices in this text.

Implications of a Pandemic

All phases and activities of this research followed UCalgary COVID-19 pandemic protocols, which were consistently updated with the provincial and federal mandates of Canada. This included wearing masks when closer than six feet apart, frequently sanitizing hands and surfaces, and limiting capacities to the indoor and outdoor regulations put forth. If a participant contracted the virus, social isolation procedures were enforced until they were free of symptoms and tested negative on a home rapid test. The pandemic did affect aspects of this research project, albeit not

in major ways. Depending on the wave and severity of the virus, it could be challenging to organize gatherings. Some research activities had to be adapted to Zoom, with the recordings saved to my laptop with the consent of all participants. For the most part, however, my applied research methodologies were performed outdoors and could be adapted for social distancing.

Methodology

My research process was structured in two phases over the course of four years (see Appendix C for a complete timeline). This included a preliminary fieldwork season in 2020, where I began establishing rapport among the food community of Wild Rose Country, as well as three primary research seasons in 2021, 2022, and 2023.[60] Following the seasonal cycle of Alberta, the summer months entailed more hands-on and land-based learning, while the winter months offered time for dialogue, literature reviews, environmental scans, and policy document analyses. To answer my research questions, I used four participatory methodologies–experiential farming, farm exchanges, sharing circles, and storytelling–across four main research sites[61] (Table 2). Throughout the course of my participatory fieldwork, I maintained ongoing relationships with two other rural farms, Regenera Ranch and Winter's Turkeys Farm. Furthermore, my research draws from experiences co-operating a small-scale farm with my husband called West Quarter Farms, visiting other urban and rural farms, and working with a Siksikaitsitapi mentor to grow her household garden on Siksika First Nation.

[60] Primary research seasons were funded by a SSHRC Vanier Canada Graduate Scholarship.
[61] www.growcalgary.ca ; https://www.rootandregeneratefarm.ca/ ; https://www.happinessbytheacre.ca/

	PERI-URBAN FARM GROW CALGARY	URBAN FARM ROOT & REGENERATE	URBAN YARDS W/RURAL TIES GROWER ACTIVIST COLLECTIVE	RURAL FARMS HBTA, REGENERA, WINTERS
CHARACTERISTICS	• Not-for-profit • Semi-formal land tenure (utilizes donated private & public land)	• For-profit business • Semi-formal land tenure (9 separate plots, total 1/4 acre) • Grows produce & flowers	• Not-for-profit • Privately owned household front & backyards • Grows produce & eggs	• For-profit business • 160-acres, privately owned with informal pluriactivity • Grows produce, mixed animals & flowers
POLITICAL	• Provides produce to urban food-insecure populations • Social justice & decommodification	• Small-scale food production for local economies • Caters to middle-upper class Alternative Food Networks	• Uses food production as a means of political activism	• Collaborates with & serves as a hub for other producers to strengthen regional food systems
SOCIO-ECONOMIC	• Relies on donated land & civic-minded social organization	• Collaborates with households & other urban growers • Donates excess produce to community fridges	• Collective growing for shared access and social equality • Bridges gap between urban & rural farming practices	• Strengthens ties between rural producers & urban AFN consumers
GENDERED	• Supports food agencies for vulnerable women & children • Gender equity on executive board & volunteer base	• Advocates for gender equity in food production • Supports capacity-building of young agrarians	• Fosters intergenerational knowledge about food & medicinal practices • Children are highly valued	• Encourages women's participation in decision-making in food systems • Family-oriented gatherings
ECOLOGICAL	• Low-impact, no-till lasagna mulching • Upcycles discarded materials	• Promotes responsible management of land & water • Low-impact, composting, no-till, pollinator plants	• Recognizes the importance of biodiversity in food systems • Low-impact, raised beds, pollinator plants	• Implements holistic farming techniques, including cover crops & rotational grazing • Low-till, natural inputs, integrated pest management
CULTURAL-SPIRITUAL	• Promotes collective health through diverse food practices & knowledge • Monthly firechats	• Views the land and food as living entities deserving respect & care • "I don't grow plants, I help plants grow"	• Encourages community gatherings that honor food & culture • Share intercultural teachings at monthly potlucks	• Honors the spiritual connection to land, water, nature, and food • Prayer & smudge before/after animal harvests • Uses all parts of the animal
PITFALLS & POLITICS	• Dependency model • Loss of land access • High volunteer turnover • Poor management	• Market demands • Loss of land access • Vandalism • Individual burnout	• Social organization • Cultural and political context • Restrictive legislation • Technical knowledge & skills	• Market demands • Convenience model • Supply chain disruptions • Lack of precipitation

Table 2: Research Sites & Relational Foodways Characteristics

Selecting multiple research sites rather than focusing on a single location can enhance the depth, breadth, and reliability of anthropological research. While studying one site might allow for an in-depth understanding of a particular farm or community, multi-sited ethnography provide comparative insights, allowing researchers to better capture diversity, identify patterns, and validate findings across different contexts (Falzon, 2009). Analyzing and participating on multiple farms in Alberta as research sites offers several advantages for studying agricultural practices, community dynamics, environmental adaptations, and economic impacts. As previously demonstrated in Table 1, the farming landscape of Wild Rose Country is diverse, encompassing varied geographical regions, crop types, livestock systems, and farming techniques. Using multiple farms as case study sites provides a comprehensive understanding of the agriculture sector in this Prairie Province, addressing the local and regional variations that influence farming practices and community resilience. To complement my immersive ethnographic methods, I draw from quantitative data gathered by Statistics Canada. Statistical insights are beneficial for evaluating broad patterns of biodiversity metrics, soil health indicators, and water usage, further highlighting the interconnected aspects of food systems.

Although my case study site scope is narrowed to agricultural operations that identify as regenerative, they are distinct in multiple ways. Despite their differences and extent of relationality, which I describe further in Part II, a multi-site approach provides insights into the shared challenges, innovations, and social factors shaping regenerative practices and community identity. Moreover, understanding the pathways, pitfalls, and politics of regenerative farming systems that may not look or function the same is crucial for making effective agricultural policy recommendations that support water conservation, carbon management, soil health, biodiversity,

and social resilience. Next, I discuss the strengths and limitations of my methodology within the context of anthropological research at large.

Experiential Farming

In each of my research sites, I employed an experiential learning[62] (EXL) approach which involved actively engaging in regenerative farming practices alongside my collaborators. This research methodology operationalizes CAS theory (Edelman & Wolford, 2017), answers key APE questions, and employs a practice of FPE by engaging diverse members of the community through place-based, land-based pedagogy (Alfred, 2014; Ballantyne, 2014; Galt et al., 2012; Judge, 2020; Mannion et al., 2013). While adhering to ethical protocols (see Appendix D for the Protocol for Experiential Research), I supported my collaborators in designing crop plans that integrate cultivars, pollinator plants, and animals where possible. We made logistical plans for acquiring seeds and tools, setting up irrigation, and organizing labour for bed preparation, planting, and harvesting. While participating in these daily activities, I made the following observations (Table 3) across all field sites.

	Research Observations of Relational Dynamics
Political Relations	• knowledge of municipal, provincial and federal regulations • knowledge of subsidies, credits, grants, and other opportunities • rights and access to water, land, resources
Socio-economic Relations	• land tenure and financial responsibilities • most common needs and problem-solving • resource and knowledge sharing • participation in institutions/organizations • inputs and outputs • distribution channels and market relations • scale of operation • access to processing facilities • security of personal food needs
Gendered Relations	• divisions of labour

[62] For more on EXL, see Francis et al. (2011), Parr and Trexler (2011), and Wiedenhoeft et al. (2003).

	• 'fruits' of labour • decision making roles and practices
Ecological Relations	• soil health management • water resource access and use • biodiversity management • seed-saving processes • labour and technology management • climate-specific strategies
Cultural-Spiritual Relations	• ethnoecological and phenological awareness • rituals and ceremonies • procurement of 'wild' foods

Table 3: Experiential Research Observations

In anthropology, experiential farming offers a distinctive and hands-on approach to understanding agrarian societies. Rooted in experiential and participant observation techniques, this method allows anthropologists to experience the daily routines, social dynamics, and ecological knowledge that underpin agricultural communities. By actively engaging in farming practices, anthropologists gain a firsthand perspective on the physical and emotional labour involved in agricultural work. This immersive experience fosters empathy and a deeper appreciation for the values, beliefs, and survival strategies embedded in farming (Veteto & Crane, 2014). Experiencing the daily challenges and routines of farmers allows anthropologists to see beyond theoretical knowledge, creating a more nuanced understanding of the community's life. This firsthand experience is particularly valuable in revealing the impact of environmental factors, socioeconomic conditions, and cultural values on farming practices.

When anthropologists participate in farming activities, they also gain access to local, often tacit, knowledge that might be overlooked or inaccessible through observational or interview-based research alone (Price & Palis, 2016). Many farming practices are embedded in practical, experience-based knowledge, often passed down through generations and tied to specific environmental and cultural contexts. Experiential farming allows researchers to learn these techniques directly, making it easier to capture nuanced details about crop cycles, soil

health, pest control, and seasonal rhythms that shape the agrarian lifestyle (Charatsari et al., 2022).

Experiential farming also helps dismantle the hierarchical distinction between the researcher and the subject. When anthropologists work side-by-side with farmers, they are perceived less as outsiders and more as community members, fostering trust and openness (Hilton, 2018). This shift in perception can lead to more candid interactions and insights that might not emerge in traditional interviews. Engaging in a shared activity creates a sense of camaraderie and mutual respect, which can facilitate a richer, more collaborative form of ethnographic research (Mwaseba et al., 2015). Finally, experiential farming provides anthropologists with a unique opportunity to observe the dynamic interplay between humans and their natural surroundings. By experiencing this relationship firsthand, researchers can better understand how communities adapt to ecological changes, respond to resource scarcity, or deal with socio-political challenges (Unterberger, 2003). This contextual knowledge is particularly useful for research on environmental anthropology, agroecology, and the anthropology of food systems.

As with any methodology, however, experiential farming has its advantages and limitations. Farming is physically demanding and requires specific skills that academics may not possess. This physical limitation can hinder the ability of scholars to fully participate in certain farming activities, leading to incomplete immersion in the community's way of life. Moreover, a lack of expertise might make them more dependent on local guidance, which can sometimes limit independent observations or create a reliance on others for insights. Experiential farming is highly time-intensive, as agricultural practices typically span months or years. To gain a holistic understanding of the farming cycle, anthropologists would need to invest substantial time in the

field, which may not always be feasible due to funding, personal commitments, or institutional constraints. Short-term engagement can lead to incomplete knowledge of seasonal agricultural patterns, ultimately affecting the depth and quality of the anthropologist's findings.

Because experiential farming is an immersive methodology, anthropologists may form close relationships with the community. Some scholars argue that this empathetic engagement, while beneficial, could introduce bias or lead to subjective interpretations. Personal connections between researchers and research "subjects" are thought, by some, to limit the objectivity required to analyze daily practices within broader social, political, and economic frameworks. Nevertheless, as stated by Jerremie Clyde of Little Loaves Farm, "empathy is necessary for making meaning, particularly in how we know the past." Both Karsten R. Stueber (2008) and David Carr (2008) engage with the role of empathy in historical and social research, arguing that empathy–in both basic and reenactive forms–is epistemically necessary for understanding human actions within historical narratives. For Stueber, reenactive empathy is crucial in history because it allows us to grasp the subjective rationality behind actions rather than reducing them to mere causal generalizations. He critiques the idea that historical explanation should rely solely on general laws (as in positivist history) or broad structural determinism. Instead, he advocates for narrative explanations that incorporate empathetic engagement to make sense of historical agency.

Carr, while also defending the role of narrative in historical explanation, is more critical of approaches that emphasize individual empathy too much. He argues that the meaning of actions emerges from the broader context of narratives rather than from purely internal, subjective understanding. He critiques the view that historical understanding should be based only on reconstructing individual reasoning, suggesting instead that narratives provide structure

to both historical events and human experience. Carr's skepticism toward the overemphasis on empathy stems from his belief that actions and events acquire meaning within a narrative framework rather than from isolated agents' intentions. Understanding history, Carr asserts, requires recognizing patterns, structures, and collective meaning rather than just individual thoughts or motivations. Jerremie Clyde, both a scholar and a farmer, reflects on the ethical responsibilities of research, drawing on Wendell Berry's *The Unsettling of America: Culture & Agriculture* (1997). Extending Berry's metaphor of the nurturer versus the exploiter, Clyde argues that just as a farmer must work with the land rather than extract from it, a researcher must engage with communities in ways that foster relationships and long-term well-being rather than prioritizing knowledge extraction.

Berry's question—*"What is its carrying capacity?"*—applies to research as well: How much engagement is ethical without overburdening the community? Over-researching, like over-farming, can disrupt local rhythms, strain relationships, or misrepresent cultural practices. Acknowledging power dynamics, researchers should prioritize deep, ethical relationships over quick data collection, ensuring their work serves communities rather than institutional goals. The researcher-farmer metaphor challenges scholars to move beyond extraction toward collaborative and ethical knowledge production. It emphasizes humility, relational accountability, and sustainability—key principles in applied anthropology and community-based research.

In the case of my fieldwork, I am considered a member of the farming community in which I conduct research. There are ongoing debates within academia about the potential for scientific rigour where pre-established relationships exist, as people's behaviours and stories may differ than if they were working with an external researcher who has a 'detached' lens. But in a decolonial approach to research, it is impossible to compartmentalize relationships, as they all

intersect to make us who we are (Wilson, 2008). As my ethnographic field is the field(s) in which I grow crops, medicinal plants, and animals, the seeds of these relationships, projects, and reflections will continue to grow and reroot. Rather, there is no end to fieldwork that is part of a researcher's life. If done reflexively, locating oneself in relation to land, language, politics, spirituality, the cosmos, and ethnoecological communities can be a pathway to challenge embedded power hierarchies (Absolon & Willet, 2005; Bilgen et al., 2021). This approach pushes against the dichotomized researcher/subject or academic versus wider communities (Caradonna & Apffel-Marglin, 2018; Deloria, 1969, 1997; Latour, 2012). Working hand-in-hand with my counterparts to shear sheep or load turkeys, tag yaks or plant garlic has built trust and mutual respect, as well as broken down social barriers overtime.

Finally, experiential farming, like other ethnographic methods, is inherently context-specific, making it challenging to generalize findings across different agricultural communities. The insights gained are often unique to a particular ecological and cultural context, which may not apply to other regions with different environmental conditions or sociopolitical structures. This limitation can make it difficult for anthropologists to draw broader conclusions about agricultural practices or farming as a cultural phenomenon. For these reasons, my research employs multiple methods to offer a rich, ethnoecological perspective on farming as both a livelihood and a relational practice.

Farm Exchanges

In anthropology, a farm exchange methodology involves anthropologists facilitating exchanges between farmers from different communities, regions, or cultural backgrounds, allowing them to share knowledge, practices, and insights directly. To complement experiential farming, my counterparts and I established and maintained relationships among other producers by

coordinating and participating in urban and rural farm exchanges. During seasonal events, we had hands-on learning in lambing, sheep shearing, hide tanning, beef harvesting, coop building, poultry culling, greenhouse raising, tree planting, yak tagging, gathering wild medicines, and willow basket weaving (see Appendix E for Monthly Experiential Research Activities). Farm exchanges deepened our understanding of ecosystem resilience, native plants and pollinators that can be integrated into regenerative agricultural models, pathways for building vertical and horizontal coalitions, and challenges faced by rural and urban small-scale farmers alike.

A method of farm exchanges is designed to foster cross-cultural learning, provide comparative insights, and highlight both the adaptability and variability of agricultural practices. By arranging these exchanges, anthropologists can observe how farmers interact, communicate, and adapt practices, offering a unique lens into the social and practical aspects of farming. As with other research methods, farm exchanges have distinct utilities and limitations. For one, farm exchanges provide a structured yet flexible environment for farmers to share their skills, techniques, and agricultural knowledge across cultural and regional boundaries (Ahmed & Kirtuniya, 2024; Thomas et al., 2020). This direct sharing fosters a level of detail and nuance that may not emerge in interviews or surveys. By bringing together farmers with diverse backgrounds, anthropologists can gain insights into agricultural knowledge systems and practices that are otherwise difficult to compare. Knowledge networking and transdisciplinarity facilitate the integration of informal and formal knowledge, which strengthened sustainability and resilient agriculture (Šūmane et al., 2018). Moreover, farm exchanges reveal how cultural context shapes farming practices, encouraging an appreciation of agricultural diversity.

When farmers observe and discuss each other's methods in real-time, anthropologists can witness how they respond, adapt, and potentially incorporate new techniques into their own

practices. This adaptation process is a unique aspect of farm exchanges, allowing researchers to observe the transmission and modification of knowledge firsthand. Watching farmers experiment with and adapt to new methods or tools provides anthropologists with insights into the flexibility of farming practices and how they may evolve in response to environmental or economic pressures. Additionally, farm exchanges can strengthen social bonds and foster a sense of solidarity among farmers who may otherwise feel isolated in their struggles with common challenges, such as climate change, market pressures, or resource scarcity (Silvert et al., 2022). This solidarity is an important cultural dimension that anthropologists can document, as it reveals how farmers collectively address shared issues. By observing these interactions, researchers can better understand the social networks that underlie agricultural communities and how these networks contribute to resilience in the face of adversity.

Farm exchanges allow for the preservation and dissemination of traditional farming practices, which are often endangered by industrial agriculture. These exchanges provide a platform for farmers to demonstrate practices that have been adapted over generations to suit specific environmental conditions and social needs (Agnoletti & Santoro, 2022; Kansanga et al., 2021). Anthropologists can document these techniques and observe how they are perceived and potentially adopted by other farmers, providing valuable insights into the relevance and resilience of traditional knowledge in contemporary agricultural settings. Furthermore, in a farm exchange setting, anthropologists can observe the dynamics between farmers from different backgrounds, noting how social status, language, age, or gender influences interactions and knowledge exchange (Adamsone-Fiskovica & Grivins, 2021). These interpersonal dynamics offer important insights into broader social hierarchies and power relations within and between farming communities. For instance, an anthropologist might observe whether certain farmers are

more vocal, whose advice is heeded, and how differences in socioeconomic backgrounds affect participation and influence within the exchange.

On the other hand, organizing farm exchanges can be complex and costly for both farmers and academics, as they often require travel arrangements, accommodations, and coordination across different communities or regions. For anthropologists and research institutions with limited budgets, these logistical hurdles can make farm exchanges difficult to conduct on a meaningful scale. Additionally, the time and resources required may limit the number of participants, which could restrict the diversity and depth of insights gained. Although farm exchanges can facilitate knowledge sharing, there is a risk that the exchanges may remain superficial, especially if they are brief or constrained by language barriers. Farmers may not have enough time to fully test or integrate new methods into their own practices. Without sustained engagement, farm exchanges might only offer a surface-level exposure to new techniques, limiting the depth of insight that anthropologists can derive about long-term adaptation and learning processes. For this reason, farm exchanges included in this research occurred over four years.

Bringing together farmers from diverse backgrounds may also lead to cultural misunderstandings, especially if their practices or beliefs differ significantly. These differences could create tension or skepticism, potentially discouraging participants from open knowledge-sharing. Anthropologists need to carefully navigate these interactions, as miscommunication could lead to conflict or reluctance to participate fully. Such misunderstandings may also distort the data if participants do not feel comfortable openly discussing their practices or perspectives. Thus, farm exchanges can inadvertently replicate existing social or economic hierarchies, especially if there is an imbalance in resources or

perceived expertise between participants. For instance, farmers from wealthier regions or those using modern techniques may be perceived as more knowledgeable, potentially overshadowing traditional or Indigenous practices. This imbalance can influence the direction of knowledge exchange, as some participants may feel pressured to adopt practices that are not necessarily suited to their own environmental or cultural context. Anthropologists must be mindful of these dynamics to ensure that all voices are respected and that traditional knowledge is not marginalized. Nevertheless, research shows how respectful cultural exchange cultivates a more inclusive, empathetic, and interconnected global society (Agbai et al., 2024), which is vital for food system transformation.

One of the main challenges of farm exchanges is measuring whether the shared knowledge and techniques actually have a lasting impact on participants' agricultural practices. Farmers might experiment with new methods during the exchange, but without follow-up, it can be challenging for anthropologists to determine if these changes are sustained over time. To assess long-term impact, researchers would need to revisit participants after the exchange, which may not always be feasible. This limitation can hinder the ability to fully understand the effectiveness and adaptability of knowledge-sharing through farm exchanges. Ultimately, farm exchanges can offer profound insights into the resilience and adaptability of farming cultures, provided they are approached with sensitivity and a commitment to long-term engagement.

To supplement farm exchanges, I coordinated farm tours between small-scale farmers in Wild Rose Country, Young Agrarians Apprentices, and the University of Calgary Food Studies Interdisciplinary Research Group (Figure Set 5). Touring farms, beyond the once a year Alberta Open Farm Days, helps to build a political ecological awareness about how climate change implications are distributed and what that means for regionally-based foodways.

Figure Set 5: Farm Tours in the City (*left*) & the Countryside (*right*)

Both farm tours and exchanges support horizontal knowledge-sharing, can break down perceived divisions between 'experts' and 'nonexperts' (Dale, 2021), and have the potential to catalyze discussions around land ownership, Indigenous displacement, unsettling the settler (Matties, 2016), and anthropocentric notions of natural resources. Many of these themes were further unpacked among research participants through group sharing circles and storytelling.

Sharing Circles

As a methodology, group sharing circles involve gathering community members in a circle to openly share their thoughts, stories, and experiences on a particular topic. This collaborative format creates a safe space for participants to express themselves, facilitating a sense of collective voice and shared understanding. Group sharing circles have roots in many Indigenous and community-oriented societies, where communal dialogue serves as a way to solve problems, transmit knowledge, and strengthen social and spiritual connections through a process of "re-membering" (Absolon, 2011; Absolon & Willet, 2004, p. 13). Sharing circles are distinct from Western focus groups, which typically recruit participants through advertising, are facilitated for up to two hours by a trained researcher in a central location, follow a

semi-structured question format, and may offer refreshments and monetary incentives to participants (Rothe et al., 2009). While overlaps exist, sharing circles traditionally recruit participants through word of mouth, are guided by respected members of the community such as Elders, occur at culturally relevant locations for a longer period of time, follow an open-ended format that embraces the range of emotions, and offer food and beverages with a potential gift of cultural significance (Hunt & Young, 2021).

Group sharing circles emphasize collective reflection, which can be especially meaningful in close-knit communities. Through shared storytelling and discussion, participants can deepen their understanding of shared challenges, histories, or cultural values. This collective dimension is valuable for anthropologists interested in studying group identities and community resilience. By observing the interaction among participants, researchers gain insights into social cohesion, shared values, and collective problem-solving methods. The circular arrangement and communal focus create a sense of shared responsibility, breaking down hierarchical barriers and promoting openness. In this environment, all participants have an opportunity to contribute equally, allowing even quieter or marginalized voices to be heard. For anthropologists, this inclusivity helps capture a wider range of perspectives within the community, leading to a richer and more diverse dataset. In a sharing circle, participants interact with one another directly, offering anthropologists a unique opportunity to observe social dynamics, power relations, and group hierarchies. The ways in which participants respond to each other—whether through agreement, disagreement, or deference—can reveal underlying social structures and relationships within the community. This aspect of group sharing circles enables researchers to better understand social networks, alliances, and even tensions that may not be visible in individual interviews.

Figure Set 6: Sharing Circles at Sara & Oscar's house in GFL (*left* & *right*)

In between experiential farming and farm exchanges–particularly during the winter months–I joined my collaborators in group sharing circles. Across all four case study sites, these occurred both informally and more formally, often facilitated by my community mentors, Sara and Oscar (Figure Set 6). Weather permitting, we would gather outside, share food and drinks, and set our intentions for open expression and critical thought. In some sharing circles, we unpacked the legacies of colonialism and the politics of belonging; in others we discussed property relations and our (dis)connections with the land. Different groups of people critiqued the system's unequal power structures, shared feelings of isolation, and encouraged forms of disobedience. Other recurring themes included food insecurity, economic instability, and the potential for problem-solving among neighbours or community. In many gatherings, we shared tears; in almost all gatherings, we laughed. We shared our dreams and hopes, and the barriers to getting there.

Sharing circles often provide a supportive environment where individuals feel safe to discuss sensitive or emotional topics. This atmosphere can facilitate healing by allowing participants to share personal or collective traumas, concerns, and hopes. For anthropologists, this method provides deeper insight to the emotional landscape of a community, revealing how

shared experiences are processed and narrated. As many cultures traditionally use circle-based gatherings for storytelling, decision-making, and spiritual practices, this methodology can thus resonate with and reinforce local cultural practices, making it more culturally appropriate and meaningful for participants. Aligning research methods with local customs can enhance rapport and the authenticity of the information gathered. When the sharing circle mirrors a familiar cultural practice, participants may be more open and comfortable sharing their perspectives. While this method offers unique advantages in uncovering cultural insights and group dynamics, it also comes with specific challenges.

Group sharing circles may unintentionally pressure individuals to conform to dominant opinions or social expectations. If certain participants hold positions of authority, others may feel hesitant to disagree or share dissenting views. This social pressure can skew the data, as participants may prioritize harmony over honest expression. Anthropologists must be mindful of these dynamics, as the presence of influential figures can limit the diversity of opinions shared, potentially leading to an incomplete or biased understanding. Thus, facilitating a group sharing circle requires skill in managing diverse voices, ensuring that everyone has an opportunity to speak, and maintaining focus on the topic of discussion. Additionally, managing a larger group can make it challenging to record detailed notes or track who is speaking, potentially affecting the quality and reliability of the data. For this reason, the sharing circles in my research were never larger than twenty participants.

While group sharing circles can facilitate emotional expression, discussing sensitive topics in a group setting may also lead to distress or discomfort for some participants. The public nature of sharing can sometimes pressure individuals to reveal personal stories they might prefer to keep private, potentially leading to feelings of vulnerability or regret afterward.

Anthropologists have an ethical responsibility to ensure that participants feel comfortable and supported, which may be difficult in cases where emotional subjects are discussed collectively. As well, confidentiality can be difficult to guarantee in a group setting. Unlike individual storytelling, where privacy is easier to maintain, group settings require trust that participants will respect each other's confidentiality. There is always a risk that sensitive information shared during the circle could be discussed outside the group, leading to unintended consequences for the individuals involved. This limitation is particularly concerning when working with vulnerable populations, as the risk of disclosure may discourage full participation or lead to harm. Later in this chapter, I discuss the ethical measures my key counterparts and I took to mitigate harm before, during, and after research activities.

Finally, the conversational and interactive nature of group sharing circles can lead to complex and multi-layered data, which may be challenging to analyze. The spontaneous flow of discussion and overlapping dialogue can result in data that is less structured than individual storytelling. For anthropologists, analyzing group data requires careful attention to context, tone, and the interactions between participants. Transcribing and coding group discussions can be time-consuming, and it may be difficult to accurately capture the subtleties of group dynamics, including nonverbal cues and power relations, in the final analysis. To open more lines of dialogue and triangulate information, I facilitated storytelling sessions with individuals or pairs in all four case study field sites.

Storytelling

In anthropology, a storytelling methodology involves gathering and analyzing personal narratives from individuals within a community. This approach is rooted in the idea that stories are powerful vehicles for transmitting cultural values, shared beliefs, histories, and identities, which

are often integral to understanding issues of trauma, resistance, or resilience. Storytelling highlights the lived realities of individuals, adding depth and empathy to anthropological analysis and allowing researchers to portray the emotional dimensions of culture. As stories reflect social norms and collective memory, this methodology offers insights into how communities view themselves, how historical events are remembered, and how collective identities are constructed. Analyzing recurring themes, metaphors, and plot structures within stories can reveal shared experiences and ideologies that shape group cohesion and social values. By capturing stories, anthropologists can access the emotional layers of a community's experience, providing insights that might not emerge through more structured, quantitative, or observational research methods.

In her work with Tlingit and Athapaskan peoples of North America's Northwest region, Canadian anthropologist Julie Cruikshank (2007) speaks to the value that oral histories can add to scientific knowledge, particularly as they address place, personhood, and kinship. Helping to bridge the gap between researcher and participant, storytelling creates a conversational and relational environment that has the potential to build stronger, more trusting relationships, as individuals feel empowered to share their personal experiences. Due to the flexible nature of storytelling, collaborators are able to share what is most important to them (Adese, 2014). This method fosters empathy and respect, allowing anthropologists to engage in meaningful dialogue that humanizes the research process and encourages more candid insights. Storytelling can transform the research dynamic, making it feel less like an interrogation and more like a partnership in sharing knowledge. This can result in broader social impacts, as the narrator of a story has the ability to change history as it is known; it matters how and by whom stories are told (Trouillot, 1995).

Guided by a semi-structured set of themes and topics (Table 4), I engaged individuals and pairs of research participants in 30-minute to 2-hour storytelling sessions (see Appendix F for the full Storytelling Guide). I began most sessions by asking them how they understand and practice the concept of relationality; how do you relate to, or connect with, other living beings, including humans, non-humans, the land, your crops or animals, etc? By starting with a broad, open-ended question, we could walk together on multiple pathways; some rooted in spirituality or environmental ethics, others grounded in parenthood or intergenerational teachings. Later in the conversation, I asked what factors challenge their ability to practice relationality, particularly in their foodways and farming systems. Many spoke to economic and ecological factors, while others emphasized gendered or sociopolitical barriers. Collectively, their stories helped form my research's analytical framework of relational foodways.

	Guiding Themes
Family Farm Dynamics	• household demographics; roles and responsibilities; most common needs • gendered divisions of labour; management of family finances; daily activities
Community Relations	• relationships with neighbours; problem-solving in the community • cultural activities; involvement in community associations and programs
Land	• rights, access, and barriers to land, water, above/below ground resources • knowledge of region's colonial history • connections with and spirituality tied to the land and all living beings
Foodways- Consumption	• access, security, and affordability of culturally-appropriate foods • dependence on food banks; participation in AFN; relationships with local farmers • participation in hunting, fishing, trapping, gathering, medicinal plants
Foodways-Production	• soil health, biodiversity, water consumption; understanding of 'regeneration' • distribution channels, marketing, cost analysis, economic viability; external inputs • knowledge of credits, subsidies, policies; regulations; inspection and processing • mentors, networks of farmers, youth interest in farming; labour arrangements
Political Education	• capitalist world economy; approaches to development; dependency model • urbanization, population growth, immigration; reform versus radical opposition • bylaws, legislature; knowledge-making

Table 4: Storytelling Guiding Themes & Topics

Like any methodology, storytelling has its limitations, from potential biases to challenges in verifying information. Storytelling is inherently subjective, as stories reflect personal perspectives, emotions, and individual interpretations of events. This subjectivity can introduce bias, both from the storyteller and from the anthropologist interpreting the stories. Participants may choose to emphasize or omit certain details, consciously or unconsciously presenting themselves or their community in a particular light. This selective nature of storytelling can make it difficult to obtain an objective or comprehensive understanding of certain aspects of the culture or social dynamics. Since stories are often based on personal memory, they may be prone to inaccuracies or exaggerations, especially over time. This lack of reliability can be a limitation for anthropologists who aim to verify historical events, practices, or social structures. Memories are susceptible to distortion, especially when influenced by community expectations or traumatic events, making it challenging to verify the factual accuracy of stories. For anthropologists seeking to corroborate historical accounts, storytelling can present difficulties as a primary source of data.

Stories are also highly personal and context-specific, which can limit the generalizability of findings derived from storytelling. Each story reflects the unique perspective of an individual, often shaped by their specific experiences, background, and social position within the community. In her analysis of the emancipatory potential of storytelling within participatory action research, Susana Caxaj (2015) notes an important distinction between typical Western narratives and Indigenous storytelling. She observes how Western storytelling is primarily an expression of ‘Self’, focused on individual discovery and meaning-making through a series of actions within a linear temporal framework; personal human agency and authority are asserted. While Indigenous storytelling is grounded in a unique history, revealing lived value-systems that

form the basis of governance, such as interconnectedness, relationality, and sacredness. Reality is viewed as both cyclical and rooted to local places, guided by cosmic belonging and responsibility to Nature. Through iterative reflexivity, ways of knowing and being that are holistic, experiential, nurturing, and meaning-full are captured in stories that constitute acts of resistance.

While a storytelling methodology offers rich, detailed insights, anthropologists may struggle to draw broader conclusions or apply these findings to other contexts or populations. This limitation makes it challenging to generalize the cultural insights gained from storytelling across different groups or societies. Moreover, the presence of a researcher–even one that is considered a member of the community–can impact the way stories are told. Participants may alter their narratives based on what they believe the anthropologist wants to hear or due to social desirability bias (Bergen & Labonté, 2020). This influence is particularly pronounced if the community is aware that the stories will be shared outside their cultural context. The researcher's identity, relationship with participants, and approach to questioning can all shape the nature of the stories shared, potentially skewing the information gathered.

Finally, analyzing storytelling data requires a nuanced and interpretive approach, as stories are often layered with metaphor, symbolism, and cultural references (Hyvärinen, 2009). This complexity can make it challenging for anthropologists to interpret stories accurately, particularly when working with cultures whose narrative traditions are vastly different from their own. Understanding the symbolic meaning of certain motifs, character archetypes, or narrative structures may require in-depth cultural knowledge, which can be difficult to acquire in a limited timeframe. Additionally, interpreting stories without sufficient contextual knowledge may lead to misinterpretation or oversimplification of the cultural values embedded in the narratives. In all,

storytelling is a valuable tool that, when used thoughtfully, can reveal profound insights into human experience and cultural meaning. Both group sharing circles and storytelling, combined with experiential farming and farm exchanges, helped me capture the voices, histories, and identities of the food landscapes of Wild Rose Country.

Learning Walks

In our initial research design, my counterparts and I hoped to engage in land-based learning with Niitsitapi Knowledge Keepers to better understand relationality, foodways, and the constraints of the system from Indigenous perspectives. From an Indigenous worldview, ecosystems are better understood as communities, with ethical structures and inter-species treaties (Watts, 2015). And within each place-specific habitat/society, deep and complex knowledge systems are intimately tied to the forests, rivers, coulees, and basins, which in turn shape dynamic economies, cultural exchanges, labour, and movement (Aldern & Goode, 2014). As a participatory research methodology, learning walks are a way to come to know (or reknow) the natural world and one's place in the world (Marin & Bang, 2018). While walking alongside one another, community members and researchers can share knowledge, stories, and insights about their surroundings, which are often a place of cultural significance (e.g., Nose Hill Medicine Wheel, *Estipah-skikikini-kots* or Head-Smashed-In Buffalo Jump, *Aísínai'pi* or Writing-On-Stone). This method encourages participants to reflect on their environment, practices, and histories in an organic way, and it allows anthropologists to gain a contextual understanding of place-based knowledge.

Following culturally-specific Protocols, my counterparts and I were prepared to offer tobacco, honoraria, and gifts for Knowledge Keepers' time and land-based teachings. Unfortunately, the summer of 2020 presented health risks for organizing group walks with Elders

due to the fluctuating waves of COVID-19. At the start of the following growing season, First Nations, Métis, and Inuit communities across Turtle Island joined together to mourn the loss of their kin at the hands of former Indigenous Residential Schools.[63] Several of the Indigenous-led projects I was involved with at the time were paused to grieve, attend vigils, and walk in solidarity. Leading up to and following Pope Francis' "penitential pilgrimage" to Canada in July 2022, communities likewise organized healing ceremonies among Survivors, and gathered around art, dance, film, music, and craft. With these priorities in mind, my counterparts and I began deepening our education on the Truth and Reconciliation Commission of Canada's 94 Calls to Action[64] (2015) and attending Indigenous-led workshops and ceremonies, while seeing if an opportunity would arise organically. In the meantime, we grew, tended, and honoured personal relationships (outside of a research scope) with Indigenous friends who have stewarded Wild Rose Country for generations.

Guided by a robust literature review, an environmental scan of food landscape actors, and an analytical framework of relational foodways, the collective knowledge gathered through four years of experiential farming, farm exchanges, sharing circles, and storytelling will be articulated in Part III. Throughout this collaborative research process, I was mindful of my positionality as a scholar and new farmer in the community, and was acutely aware of ethical considerations.

[63] For more, see https://www.cbc.ca/news/canada/british-columbia/kamloops-residential-school-findings-1.6084185

[64] https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/indigenous-people/aboriginal-peoples-documents/calls_to_action_english2.pdf

PART II

TENDING THE PLANTS

Herein, I present the challenges and opportunities for relational foodways in Wild Rose Country through a series of rhizomal nodes, or case studies. When an interconnected mass of subterranean plant stems sends out roots and shoots to generate new plants, it does so from its nodes. Thus, nodes both stand alone and are part of a much wider network in which they interact, akin to projects or organizations within the broader food and farming system. The first rhizome node, Chapter 4, recounts my preliminary season of fieldwork producing food with a not-for-profit peri-urban farm for social agencies. The second, Chapter 5, explores the dynamics of an urban farming business that streams its yields into the local AFN.[65] Over the course of two primary research seasons, the third node, Chapter 6, highlights collective forms of cultivation for a neighbourhood-scaled Commons. Bridging urban and rural forms of production, the final node, Chapter 7, travels to a number of farms where community is at the heart of production. Each node includes first-person, present-tense vignettes that mirror both my reflexive research approach as well as the experiences of my collaborators.

As previously mentioned in Chapter 3, the decision to include multiple case study sites supports a holistic understanding of relational foodways. Similar to my discussion on who constitutes 'participants' in a 'community,' my key counterparts and I did not want to solely engage with not-for-profits or community gardens, independent businesses or cooperatives. It was important to understand if a relational foodways approach could be sustainably employed by diverse community members with distinct motivations and means of organization. Although the specific pathways, pitfalls, and politics of regenerative farming may differ across my research sites, they all function within the confines of the same political and socio-economic system. This is the mycorrhizae that connects the proceeding nodes.

[65] Case studies 1 and 2 were funded by UCalgary Faculty of Graduate Studies Transformative Talent Scholarships.

Chapter 4: Growing for Social Agencies with a Not-for-Profit Farm

When the University of Calgary campus closed in March 2020 due to the COVID-19 pandemic, our academic community was faced with novel challenges as classes shifted online and distant travel was halted. When my intended international fieldwork was placed on hold, I turned my attention to local food networks in Calgary, observing gaps in access to, security with, and sovereignty over healthy food choices for our most food-insecure populations. To engage with local food politics, and to gain hands-on experience in community-based agrarian research, I entered into a Faculty of Graduate Studies Transformative Talent Internship (TTI) (Transformative Talent Internships [TTI], 2020) as the Executive Director of the not-for-profit Grow Calgary. This twelve-acre peri-urban farm located just outside Calgary's municipal bounds is run entirely by volunteers and donations. One-hundred percent of the non-GMO food produced is donated to 21 food access agencies serving Calgarians living below the poverty line. From May to August 2020, I was tasked with supervising 40 coordinators across 16 departments (e.g., Material Procurement, Fundraising, Information Technology), over 500 volunteers, and 83 Small-Scale Agricultural Farm Management Certificate trainees.

My first task was to develop a multi-level, free training program to build the capacity of aspiring agrarians in advanced urban farming and leadership skills. Trainees would accrue hours at their own pace while striving to meet learning outcomes in agroecology, crop care, water, soil, greenhouse design, safety, and management. Within each of the categories, 70 learning targets (on composting, irrigation, seed diversification, crop rotation, etc.) were organized and scaffolded with specific, measurable, attainable, relevant, and time-bound (SMART) goals (Lawlor & Hornyak, 2012). For example, one SMART goal stated: *By the end of my certificate program, I will be able to: Facilitate discussions on sustainability, biodiversity, and the*

ecological benefits of small-scale agriculture; Transplant seedlings safely; Identify common pests and manage harmful species naturally; Harvest and process different varieties of crops. Factors such as weather, pests, transportation, number of other trainees present, and growth rates of crops influenced the feasibility of particular SMART goals, which were adjusted to meet the needs of the learners. All targets aligned with the organization's meta transformative agenda of bolstering food security in Calgary through a more ecologically sustainable and socially-just agrarian model.

While sustaining soils and biosequestration, we emphasized earth care, people care, and future care through our synergetic approaches. Utilizing whole-systems thinking, we simulated and stacked the patterns and resilient functions observed in the natural ecosystem on the farm. For example, we operationalized complementary and adaptive techniques that bolstered ecosystem resilience, such as mulching, companion planting, and chopping and dropping. We also optimized the use of low-impact local resources, such as compost, through our household and business compost program; we minimized the use of agro-chemicals through natural fertilizers and integrated pest management systems; and reduced high-impact technologies and energy-intensive inputs by supporting regenerative practices.

To connect with the Calgary community, I worked alongside my colleagues to mobilize volunteer days with youth, including the national Katimavik volunteer program. To reach wider audiences and increase awareness about the organization's efforts to address food insecurity, we conducted interviews with local news stations, including CBC, CTV, and CJSW. Through Grow Calgary's social media platforms and weekly newsletter, we connected over 12,000 followers with activities, educational programs, sponsors, and cultivation tips from the farm. Another way in which our team built community relationships, especially during the COVID-19 pandemic,

was through a #Kits4Kids initiative. Mini growing kits included donated trays, domes, soil, seeds, and pots, which were distributed to low-income families in Calgary, along with an instructional pamphlet. The goal of this project was to increase the capacity of youth to grow fresh food from home. When the call was sent out via our social media platforms between February and April of 2020, over 10,000 Calgarians signed up to receive kits. This heightened interest in food access and security at the household level was likely in response to the COVID-19 quarantine mandate, which began in March 2020 in Calgary. An upward trend in gardening was also reflected in the lack of available seeds, soil, and other growing materials at garden centres around the city.

Our team recognized that change occurs not only at the community level, but through institutional and policy reforms. Taking part in Grow Calgary's Policy Team, we discussed the underlying politics of food production in Calgary and Alberta and planned to make recommendations to the Government of Alberta through the Local Food Engagement program. For instance, through the #Mow2Grow initiative, Grow Calgary advocated for changes in urban land use that would convert high maintenance grass lawns into food producing ecosystems that would attract native pollinators and increase local food resiliency. In addition to advancing political agendas concerning land use, sustainable agriculture, and gaps in food security, Grow Calgary recognizes the connection between food and shelter. Supporting Article 25 of the United Nations Declaration of Human Rights (UN General Assembly, 1949), the organization advocated for the fundamental rights to shelter through a Microhome initiative. Each living space, which was less than 200 square feet, was designed and constructed by Calgarians in a friendly competition. The goal was to raise awareness about the lack of affordable housing options in

urban centres, and to provide alternative and feasible living conditions that could be supported at the municipal level. Next, I use storytelling to bring this experience at Grow Calgary to life.

Fieldnotes of a Reflexive Practitioner

Winding my way through an awakening city, a clear sky and crisp morning chill indicate it will be an enriching day out on the land. With a coffee in hand, my mind begins preparing for the 8 A.M. shift ahead, including which learning targets and activities we will set out to achieve. Soon, horizons of prairie pastureland come into view as the city sprawl fades into the distance. As my car rattles down the long, dirt path, eight greenhouses dot the landscape, sheltering tomatoes from yesterday's hailstorm. I wonder what the damage will be for the rest of the produce growing outside in no-till 'lasagna' beds (Figure Set 7). To my delight, several certificate trainees have already arrived and begun surveying the land for potential hazards, plants in need of water, and tools left outside from yesterday's shift.

Figure Set 7: Growing in lasagna beds (*left* & *right*)

Once everyone arrives, we come together in a circle to introduce ourselves, acknowledge the land and its long-held stewards, discuss safety protocols, and set learning objectives for the day. Teamwork and cultural awareness are built by encouraging the use of trainees' first names

and preferred gender pronouns, as well as common phrases in their language if they are not primarily English-speakers. Cultivating an intentional and safe environment for all trainees to be heard and understood is central to the farm. This is especially important as some trainees are joining for the first time while others have already accrued over 50 hours. Therefore, as an instructor, I have to be mindful of differentiating instruction and tailoring learning targets to meet the needs of my learners. To facilitate this process, I work alongside Farm Managers, who support trainees in meeting their SMART goals, as well as delegating tasks, monitoring progress, and making adjustments as necessary.

The overarching goal or thread that ties each lesson together is "Keep Plants Alive" (KPA—acronyms are used to engage learners and help them recall important concepts and practices). From this point of departure, I start the morning shift by prompting trainees to irrigate all crops on the farm. This 20-30 minute group activating strategy encourages interaction among trainees, thereby strengthening cohort bonds and lines of effective communication. First, a Farm Manager facilitates a tutorial for using the water pump, handling hoses, and differentiating between soft, aggressive, low, and high watering techniques. Trainees are given the choice to water outdoor crops (e.g., squash, corn, kale, peas) with the hefty hoses (Figure Set 8), or tomatoes in greenhouses with watering cans.

Figure Set 8: Applying irrigation techniques (*left* & *right*), *photos credited to Camilo Gonzalez*

During this task, the Farm Manager and I walk around the outdoor classroom prompting trainees to identify the plants they are watering, the pollinators they observe, and any changes in plant health they notice. We pose questions such as, “which plants require more mulch around their bases? Are any plants damaged by sun exposure or hail storms? Which plants need to be thinned, pruned, or harvested?” If I notice that a trainee is using an aggressive, low watering technique for plants that require soft, high watering, I gently instruct them to adapt their approach and review the reasoning behind the methods. Before diving into a guided practice on transplanting seedlings, all trainees are encouraged to take a break and rehydrate. During this time, we reflect on the learning process thus far and discuss best practices for water conservation, effective irrigation engineering, soil erosion management, companion planting and mulching for soil structure, and environmental conservation via minimization of the farm’s impact on the land.

Gathering around an outdoor table, the trainees learn proper handling techniques for transplanting peas. After several demonstrations by a Farm Manager, trainees take their places in an assembly line, mixing soil and compost to prepare the pots, transplanting seedlings from smaller into larger pots, watering and covering the roots with mulch, and placing them in a shaded spot for 24 hours. If I observe a trainee pulling the seedling out of its germination tray from the root, forgetting to water or mulch, or placing it in the sun, I prompt another trainee to reiterate the process and, if necessary, assign pairs for guided mentoring.

After 20-30 minutes, we take another water break, reflect upon the learning outcomes from transplanting, and discuss best practices for seed germination, indirect versus direct planting, sun exposure and irrigation frequency, and how to test the soil to determine watering needs. We then shift to independent learning activities to promote student choice and

self-regulation. One trainee chooses to work in the seed bank, sorting mixed packets of seeds into their corresponding containers and compiling a database of seed varieties (Figure Set 7). Another artistically-inclined participant paints signage around the farm to help other volunteers identify crop types, waste management stations, and greenhouse numbers. A pair of trainees tend to the carrot beds, weeding thistles and thinning rows for optimum sun exposure and resource allocation below the surface. Others prune and process tomato leaves for a natural pest management spray, construct a new greenhouse out of recycled materials, and turn the compost piles. Again, the Farm Manager and I walk around to each station answering questions (Figure Set 7), instructing best practices in an approachable tone, and consistently aligning their activities back to the learning target of the day: KPA.

Figure Set 9: Seed bank (*left)*; station checks (*right*), *photos credited to Camilo Gonzalez)*

In the last half hour of the morning shift, all trainees harvest produce to donate to one of our social agency partners. I instruct the Farm Manager to demonstrate optimal techniques for harvesting lettuce, peas, kale, tomatoes, arugula, and more, which are placed into 5-gallon buckets for easy transport. Everyone disperses independently or in pairs to harvest a crop of their choice. With bountiful produce in hand, we return to where we began in a closing circle. Reflecting on our morning, each participant, whether they be a trainee, instructor, or Farm Manager, indicates what they would "Add, Remove, and Keep" (ARK) from their shift. This

dialogic practice encourages learners to critically engage with and become invested in their learning process and leadership abilities. The closing circle also serves as a formative assessment to measure deep learning. I ask, "in which learning activity did you absorb the most information? Do you now feel confident teaching that activity to a peer? Which instructions could have been presented more clearly? How could we have completed a task more efficiently and effectively?" With all voices and opinions heard, we capture the day with a photograph and deliver the produce to a food access agency in Calgary.

Exhausted and covered in dirt on my drive home, I reflect upon my approaches to teaching and learning, and my own access to food and the nutritional security that I am privileged to have. Many of our food recipients living below the poverty line do not have the means to grow their own fresh produce and must make difficult decisions around affordable food purchases. Bridging the gap between academia and community-driven initiatives through engaged learning can play a key role in weaving rural, urban, and agrarian networks. In turn, this will build the capacity and knowledge of ecologically sustainable and culturally relevant food production.

Food for Thought

By the end of the 2020 growing season, a total of 83 trainees were enrolled in the certificate program, eighteen of whom accrued 50 hours in Level I, progressed to Level II, and became Farm Managers who trained incoming volunteers. From the Level II cohort, three trainees accrued an additional 100 hours, progressed into Level III, and were responsible for leading a project on the farm. Trainees not only developed technical skills in advanced urban agriculture, but honed their interpersonal leadership abilities to train future agrarians in agroecological methods. In the words of a participant, "I liked how in the multi-tiered training program I could

accrue 50 hours before taking on a leadership position. Having the previous experience gave me more confidence, foresight, and empathy for newer volunteers."

Aligning community-driven food movements with post-secondary food pedagogy can support students and practitioners seeking to contribute to food and social justice, economic well-being, social equity, and environmental conservation efforts (Clancy, 2014; Sumner et al., 2014). If this training course in Small-Scale Agricultural Farm Management were taught in a post-secondary setting (Klinke & Samar, 2021b), it would benefit from more direct student responsibility over their specific learning activities and associated learning outcomes. From the perspective of Farm Managers and lead instructors, it sometimes proved difficult to pre-plan group learning activities as all participants had varying levels of prior training. Each student could create their individualized weekly learning target and align it with applications and assessments determined in partnership with the Farm Manager and the overall needs of the farm.

For future consideration, activist food pedagogy may be even more deeply grounded in community-based participatory research (CBPR) by working directly with marginalized community members to develop a plan of action, a knowledge mobilization platform, and a social justice framework determined by the communities themselves. Students enrolled in Food Studies courses could partner with existing social enterprises and farms for a semester to support an initiative deemed necessary by the organization (e.g., environmental scans, a PermaBlitz or high energy installation of a permaculture system in an urban space, or capacity-building workshops). These collaborations can also be tailored to an online learning environment, such as that which post-secondary institutions faced during COVID-19. For instance, students could assist farming organizations develop strategic plans, policy reports, literature reviews, website design, social media presence, and media engagement from home. Instructors may complement

these community-driven projects with guest lectures from local food activists and practitioners. Socially distanced learning activities, such as cultivating plants at home or volunteering in a neighbourhood garden, may also support a more experiential Food Studies model.

I also recognize that although our efforts of alleviating social agencies' need for fresh vegetables were made with good intentions, we were still working within a dependency model and faced challenges with consistent yields. In 2020, the farm's first donation of produce was on July 20th; the last in late September when temperatures dropped below freezing. During this two-month harvest, I observed a lack of consistency in weekly yields and donation deliveries. Most weeks, leafy greens and peas were harvested with the occasional squash, zucchini, and potatoes going to Inn From the Cold, The Mustard Seed, The Leftovers Foundation, and The Calgary Women's Emergency Shelter. In their initial operational years, Highfield Regenerative Farm[66]–a project of the Compost Council of Canada–faced a similar experience, not being able to predict exactly how much of any one food item they would have weeks in advance. This made it challenging to secure partnerships with food recovery and redirection programs like Fresh Routes,[67] which offers mobile affordable markets five days a week across Calgary and the region. Highfield's former Operations Manager, Heather Ramshaw, explains:

> "One week we had a bunch of ripe tomatoes, so I reached out to Fresh Routes to ask if they wanted to buy them. Since we don't have infrastructure for a cooler, fresh produce needs to be harvested and moved quickly. If we don't hear back from an organization in a day, we have to move the product elsewhere. But we recognize that one, people are so busy running the affordable markets and can't always get back to you the same day; two, they have a predetermined schedule with delivery and pick-up days like YYC Growers and Distributors; three, to offer more affordable prices, they need to purchase produce in bulk to sell at wholesale cost; and four, orders are made in advance and so it wouldn't make sense to say, double up on tomatoes. If we could say "I'll have 10 flats of tomatoes for you in 2 weeks" that would work better and make it worthwhile for their staff or volunteers to come pick it up."

[66] https://www.highfieldfarm.ca/
[67] https://freshroutes.ca. See UCalgary interview here: https://alumni.ucalgary.ca/stories/fresh-routes

At Grow Calgary, several weeks could go by between deliveries to any one organization due to smaller yields and volunteers' availability to drop the produce off after a shift. Therefore, the majority of foodstuffs sourced by food access programs are from the Calgary Food Bank or import-oriented distribution warehouses and grocery stores that can provide more consistency and have the means to keep produce cold. But is it only a matter of time before global agro-industries reach their extractive capacities and can no longer fill store shelves? Will there still be 'sustainability and dignity' when a person in need of food opens the fridge to find it empty? There are many layers to this complex issue, which cannot be solved by food alone; policy, organization, and structural change are required for long-term benefits.

Another gap I observed during my time at Grow Calgary was the farm's lack of direct connection with food-insecure populations in the region. To strengthen the relationships with our partner agencies, we invited staff out to the farm for volunteer days. Given some of the agencies' policies on confidentiality and anonymity of their clients, and a lack of public transit to the farm, we were never able to build direct relationships with the women, men, and children who ate the food that was grown. I asked myself, why are we not working directly with community members to build capacity in growing food? Of course, if one is facing food and housing insecurity, working at least one job and perhaps supporting a family, it is impractical to expect them to have the time and energy to then do manual labour. This perspective, although framed as 'empowerment' or 'skill-building,' places the burden of the system's shortcomings on the already disadvantaged individual to meet their basic caloric needs. Nevertheless, gaining agricultural knowledge and skills alongside structural change can add value to local food sovereignty efforts.

The Alex Community Food Centre is one charitable organization in Calgary that offers on-site gardening workshops for the GFL community. Alongside cultivation, the Centre also holds community meals, cooking classes, Indigenous foodways teachings, peer advocacy, and more. The Alex used to be one of Fresh Routes' stops, but the Centre acquired funding to now run its own in-house affordable market. After two years of discussing a potential collaboration, Highfield Farm now contributes to the market through wholesale purchasing, enabling community members to access local, fresh foods for an affordable cost. Because The Alex has several food programs throughout the week, pick-ups or drop-offs from the farm are more flexible, and doubling-up on a product could be made into value-added products.

There is also power in a collective approach to growing food that simultaneously focuses on other areas of social needs and relies on self-determination, creativity, and reciprocity more than dependency on external agencies and funding. Within growth-oriented economic development models, there exists an assumed necessity of funding for the functioning of agencies, charities, not-for-profits, community associations, businesses, and projects. Driving around the city, signs exclaim 'Apply now for a community engagement grant!' Enculturation processes laden with advertisements promoting consumerism, individualization, and capital value have conditioned us to believe that we require grants to achieve our project goals. During my time with Grow Calgary, we resisted a dependency on grants by actualizing the motto "reduce, reuse, and recycle." Through creativity and volunteer efforts, we built greenhouses, made compost, ran a city-wide seed-starting program, and grew an acre of produce without spending a loonie. Although this was a small initiative at the margins, it can be reproduced to increase food security, and bring awareness about more sustainable farming practices and holistic social frameworks which strengthen community ties.

Chapter 5: Growing for the Alternative Food Network with an Urban Farm

Over the subsequent growing season, I continued to deepen my understanding of the possibilities and challenges for regenerative cultivation in Calgary. I did so by participating in the Young Agrarians Apprenticeship (YAA) program with small-scale farmer Michael Gavin of Root and Regenerate Urban Farms (RRUF). The YAA program–modelled after Quivira Coalition's apprenticeship program in New Mexico–matches aspiring farmers with mentors to hone their farming philosophy and techniques. It supports linkages between urban and rural farmers across the Prairie Provinces to exchange knowledge, build horizontal and vertical coalitions, and advocate for alternatives to the dominant agrarian regime. From May to September 2021, Michael and I established a mentor-mentee partnership to document the processes, barriers, and opportunities of SPIN farming in Calgary. As part of my broader doctoral research, we asked: how and to what extent can urban farmers employ land-based regenerative practices to grow food for a local AFN? How can EXL partnerships between graduate student researchers, farmers, and agricultural organizations support more socially and ecologically sustainable food and farm systems in Southern Alberta?

Although Calgary's AFN has experienced a beneficial boom in advancing indoor growing for our colder climate–including container, aquaponic, vertical hydroponic, and greenhouse growing–we sought to highlight the viability of agricultural techniques that are in relation *with the land* to grow food, ecosystem resilience, and community. We intentionally use the term "with" the land, as opposed to "in" or "on," to demonstrate the relationality between growers and landscapes, as well as to reflect our application of "no-dig" agriculture. The three main principles of no-dig include not tilling to minimize soil disturbance, covering the soil as much as possible, either with living plants or mulch, and leaving the roots of crops in the soil

after harvest. Although these methods are most often operationalized in rural settings with broader swaths of land, a growing number of urban agrarians are finding creative ways to incorporate regenerative techniques into their practices.

Along with companion planting, crop rotation, and natural pest management, we utilized consecutive planting, intense rotations, and close proximity of crops to one another to allow for a large amount of food to be grown in small spaces. We employed these SPIN farming techniques in household yards, on an apartment rooftop designed by Calgary-based Modern Office of Design and Architecture,[68] between offices in the city core, and among green spaces adjacent to businesses and buildings (Figure Set 8). Over the course of five months, we collected data on the growing spaces, seeding and management practices, yields, and distribution streams for RRUF.

Figure Set 10: Cultivating on an apartment rooftop (*left*) & an urban business space (*right*)

To evoke the multiple senses of EXL *with* the land (Francis et al., 2011; Parr & Trexler, 2011; Wiedenhoeft et al., 2003), I now include two reflective vignettes. Following the seasons, Michael takes you behind the scenes of an urban farming business. I then focus on a day in the field–both ethnographically and agriculturally–through the lens of an agrarian anthropologist.

[68] https://www.canadianarchitect.com/growing-together-grow-calgary-alberta/

Urban Ag Through the Seasons: Vignette by Michael Gavin

The growing season in Calgary officially begins while the snow is still flying in this area. The winter months offer a rest, but also a time for preparing and planning for the upcoming season. Farming at any scale, one's tools, equipment, seeds, and materials need to be inventoried, assessed, and replaced as needed. Taking stock of equipment and tools starts at the end of the season, around late October, when winter approaches and we put everything away. For things like Remay, a cotton and synthetic fabric blend used to protect plants from frost and insects, we measure the lengths, check for holes, and replace as needed. This goes for all the different parts that make up intensive farming operations, such as irrigation components, starter trays, and the like. In December, we start ordering materials. This is when the farm expenses are the greatest. We replace supplies and repair equipment, take stock of what we need to grow, and collect membership fees needed to purchase the necessities to grow food in the summer. Programs such as a CSA are invaluable in helping offset some of these early and expensive purchases with pre-sold shares or CSA membership subscription fees.

The most important part of planning for the following season is done from December to January, when climate-sensitive crop designs are made for the season. With urban farming, plots and growing beds are not uniform, nor do they have equal conditions such as wind and light availability. This adds a certain level of complexity in planning that rural farms do not often have to factor in. All our planning is compiled on spreadsheets, using information from past growing seasons to create garden maps, action dates, volumes, and all the details needed to produce food at this intensive pace. This gives us a clear vision of how the season is going to look. Inevitably, the season will not go as planned (due to climatic conditions, human error, etc.). However, having this baseline plan allows us to adapt and refocus without being lost.

The first seedlings are planted indoors under lights at the beginning of March and hardened off in a passive solar greenhouse in April. From this time, the number of seedlings gradually increases to a peak around the first two weeks of May. At this point, the shelves in my office are bursting with seedlings waiting to be transplanted in unfrozen soil. Transplants will continue to be produced and planted through the middle of August, though in lower quantities. From April to May is when we also complete most of our outdoor plot preparation. Beds are cleared of winter covers and old plant debris, which are added to the farm's compost, and gently loosened with a broadfork. Compost is added to the topsoil, and drip irrigation is installed for increased water conservation. This period requires a lot of multitasking, as other projects need to be completed concurrently, such as greenhouse construction and repairs to coolers, fences, and compost bins. Some crops are directly seeded during these weeks, but most transplants will not be planted until the middle of May.

Figure Set 11: SPIN farming in the back & front of household yards (*left* and *right*)

Mid-May to mid-June is a particularly busy period, with thousands of plants transplanted and many rows directly seeded (Figure Set 11). Some plants need special care to protect them from harsh spring conditions while other plants are being attacked by flea beetles, a major pest. Covering the plants with Remay fabric can help on both counts, keeping pests away from plants

and insulating them from the wind and cold. Come the latter half of June, we enter into a bit of a lull. Most crops are planted but not ready for harvest, giving us time to catch up on any weeding that may be needed. Harvest is underway by the end of June to fill our three major outlets: local farmers markets, a CSA, and wholesale markets. We continue with weekly plantings to maintain a steady vegetable supply. Farmers markets and CSA pickups are held multiple times a week for the next 15-17 weeks (Figure Set 12). Daily activities become more predictable and routine at this point, as we "rinse and repeat" the tasks that go into filling orders week after week.

Figure Set 12: Distributing produce at a farmers market (*left*) & for CSA members (*right*)

As we approach the late season–end of September into mid-October–the rhythm changes once again. Crops are coming to completion with nothing to be replanted. This is when we start to put away irrigation and other equipment, cover beds with mulch, and cut down crop debris for compost. Odd jobs or new growing spaces are being completed; sales come to an end for our market, CSA, and wholesale distributor; and the season winds down until we reach one of the last jobs of the season. At the end of October to early November–depending on the forecast for snow and frost–we plant next year's garlic crop in the ground and keep it cozy with a thick layer

of straw. After that, we relish the brief respite in November before starting the cycle again in December.

A Day in the Field for an Ethnographic Agrarian Researcher

"Trying to grow, yeah alright, trying to grow what's outside." The upbeat chorus by Canadian rock band, The Sheepdogs, rings louder as I groggily hit snooze on my 6:30 a.m. alarm. First task: brew coffee. Second task: toast a bagel for the road. I scoop a cup of kibble into a bowl and croak out, "Eat up, doggo. You're coming today, and it'll be a long morning." Water bottles filled, *check*. Granola bars and lunch packed, *check*. Sunscreen and brimmed hat, *check*. Pulling up my overalls with one hand, I open the weather app with the other. Full July sunshine with a high of 20°C (68°F); a chance of light showers in the afternoon. Hopefully it will pass before the 3:00 p.m. farmers market.

I load up my SUV with old pallets gleaned from the side of a dumpster. Tomorrow we will be expanding the outdoor compost system. "Up, up. Let's go buddy!" With my four-legged friend in tow, I set out on the road to meet Michael at one of the household yards. When I arrive, Michael is already pulling back the white row cover on the spinach (Figure Set 13). "Good morning!," I exclaim as I secure my pup a distance away from the garden under a tree. "Drink your water, bud. We will be working for the next hour or so." With a Rubbermaid bin, pruning shears, and a scale, we harvest the biggest leaves of each spinach plant. Filling the bins to the rim, we weigh them before stacking one atop the other into our trunks. Once finished, we slide the row cover back onto the metal hoops and stake it into the ground. "Not today, flea beetles!"

Ten minutes later, we park at the next plot, hop out, and go through a similar process with radishes. We begin pulling up the larger radishes from the base of the stem, tying bunches of five

to six bulbs with a rubber band, and placing them in the bins. I run into a patch with compacted soil and use my Hori Hori knife to loosen the roots without cutting the plant. To our delight, we observe only a few bulbs with root maggot damage, which is to be expected in organic farming. Bending at the knees, I jigsaw the heavy bins between pallets and harvested spinach.

Figure Set 13: Harvesting spinach (*left*) & drying radishes (*right*) for a YYCGD bulk order

My stomach alerts me that it is now mid-morning. “Off we go, pup! Up!” Back in the car, I devour two Oats ’n Honey bars before arriving at the headquarters of Root and Regenerate Urban Farms. With the pallets unloaded, Michael and I begin shuffling the yields into a locked cooler so they don’t wilt while we wash and package them for a YYCGD order. Taking off my shoes and socks, I fill one radish bin with water to soak while Michael sets up the sun-drying racks. Bunch by bunch, we hose any remaining soil off the plants and lay them out to dry (Figure Set 11). I close my eyes briefly to focus on the cool water between my toes, opening them to a lapping sound on pavement. “Is that runoff water tasty? Ah, to be an agrarian researcher’s dog!” Turning the radishes over periodically, we move into the cooler to bag spinach. Thirty minutes and 350, 150g bags later (~115 lbs, or 52 kg, total), we are ready to pack up. While Michael reloads the dried radishes into clean bins and drives the orders to the YYCGD warehouse, I prepare for this afternoon’s market.

Foldable tables and tablecloths, *check*. Whiteboard, markers, and moneybox, *check*. Tent, chairs, crates, and coolers, *check*. I go through the mental rundown: today we will be selling large bok choy, red Russian kale, collard greens, rainbow Swiss chard, carrots (with tops on and off), purple kohlrabi, fennel, turnips and radishes (bagged or with greens), green onions, cherry tomatoes, tatsoi, parsley, dill, romaine heads, and bagged lettuce, arugula, microgreens, and pea shoots. We will also have eggs available from Happiness by the Acre's pasture-raised hens and haskap berries from West Quarter Farms. Michael returns, and we soak in the sunrays over lunch.

"Stop chasing the wild rabbits and come have a snack!" We pack up the cars yet again, drop the dog off at my house, and head to the market. By the time we finish setting up, the first market-goers trickle in. Today, a youth band is playing cover songs for the crowd. The scent of kettle corn mingles with our fresh produce, sending me into a stupor before a customer brings me back to reality. "Excuse me dear, what are these, and how much do they cost?" she asks, to which I reply, "They are homegrown sunflower shoots." I tell her they're CA$4.50 a bag. She grabs three bags plus a bundle of carrots and a dozen eggs. Around 4:30 p.m., the crowd picks up, despite this morning's weather warning. So far, so clear. The market is more likely to get rained out in June, while July brings a steady chance of hail and heat. By 6:30 p.m., we've managed to sell most of our goods and commence the final pack-up for the day. En route to the container cooler, we drop off a donation of produce to the Calgary Community Fridge.

After a physically and socially exhausting day, we go over plans for tomorrow's composting makeover and part ways. I get home, open the door, kick off my shoes, and flop onto the floor, too tired to make it to the couch. A friendly but concerned face trots over to give my

head a sniff. “Well pup, no one ever said urban farming was easy! Nor experiential research for that matter. Let’s get some food and rest for another big day ahead.”

Data and Observations

Over the course of the growing season, we grew approximately 7,000 lbs (3175 kg) of 48 vegetable varieties (Table 5) across nine urban spaces totaling 0.26 acres (1,052.18 m2). This was roughly broken down into 3,015 lbs (1,368 kg) of 20 varieties of greens, herbs, and brassicas; 2,624 lbs (1190 kg) of 10 different root and below-surface crops; and 1,075 lbs (488 kg) of 14 other vegetables and fruits that were distributed to multiple outlets. These included a weekly farmers market, YYCGD Harvest Boxes, 35 CSA shareholders, and several restaurant chefs. From mid-June to the end of September, an estimated 7,500 units of produce (i.e., 1 lb of turnips, 1 bunch of dill, 1 bag of spinach, etc.) were distributed to YYCGD, which came to 150-400 units per week, and 2,500 units were sold to the other outlets. While CSA members received a share of five to seven units per week, about 30 units of produce were sold at each market day. Located in the city’s northwest quadrant, the Triwood Farmers Market serves the Brentwood, Charleswood, and Collingwood neighbourhoods, which are mostly characterized by middle-income private households, according to The City of Calgary Community Profiles (n.d.). Moreover, 765 lbs (9347 kg) of surplus produce were donated to social agencies that serve food-insecure populations and work to mitigate hunger, including the Calgary Food Bank and the Alex Community Food Centre.

	Crop Types	**Total Crop Yields**
Greens, Herbs & Brassicas	• Arugula, Basil, Bok choy, Broccoli, Cabbage, Cauliflower, Cilantro, Chives, Collard, Dill, Kale, Lettuce, Lovage, Mustard, Microgreens, Parsley, Radicchio, Spinach, Swiss Chard, Tatsoi	3,015 lbs (1,368 kg)

Roots & Below-Surface	• Beet, Carrot, Celeriac, Garlic, Parsnip, Potato, Radish, Rutabaga, Sunchoke, Turnip	2,624 lbs (1,190 kg)
Other Vegetables & Fruits	• Bean, Celery, Cucumber, Fennel, Kohlrabi, Leek, Onions, Pea, Pepper, Rhubarb, Squash, Strawberries, Tomato, Zucchini	1,075 lbs (487 kg)

Table 5: Crops Grown by Root & Regenerate Urban Farms

While we did not collect consumer demographics, our small urban farming operation contributed to the nourishment of roughly 300 individuals per week for a quarter of the year. Producing this quantity of food required roughly one and a half full-time employees. Root and Regenerate Urban Farms does not rely on volunteer labour to complete its work but welcomes those interested in hands-on learning to take part in plot building, planting, packaging harvests, and more. One to three days per month, we were joined by volunteers who were compensated in-kind with produce. Upon harvest, we calculated the total weight of yields. With a background in bee research, Michael made observations of the diversity of pollinators (i.e., at least five Bombus species, and species of mason bees, leaf cutters, and other ground nesting solitary bees) frequenting blooming vegetables and flowers in the urban growing spaces. Flowers and medicinal plants that we sowed in the garden spaces included Comfrey, Delphinium, Lupin, Sunflowers, Tobacco, Yarrow, Aster, Strawflower, Calendula, Coneflower, Cosmos, Vetch, and Phacelia. We also gathered crop- and climate-specific data for direct sowing versus transplant dates and ages, days to maturity for both sowing types, Jang Seeder roller sizes, and feet needed per unit based on space and depth of plants, rows, and beds (Table 6).

	Arugula	**Swiss Chard**	**Broccoli**	**Dill Leaf**
Sowing type & Jang size	Direct (YYJ24)	Indirect	Indirect	Direct (MJ24)
Plants per 10 ft	672	60	13	864

Plants per ft.	67	6	1	86
In row (in.)	1.25	6	18	1.25
Between rows (in.)	3	10	16	3
Rows in 30 ft. bed	7	3	2	9
Transplant age (days)	N/A	30	30	N/A
Days to maturity	38	60	69	50
Days to maturity w/ transplant	38	46	55	50
Planting dates	April 17–May 8	May 8–May 15	May 8–May 29	May 29–June 15
Feet needed/unit	0.5	0.5	0.75	0.7

Table 6: Example of Crop Data by Root & Regenerate Urban Farms

We collected information on water usage and retention using drip lines and hemp mulch on beds. We also observed a decrease in flea beetle and cabbage moth presence on plants under Remay, a row cover material that also helps extend the short growing season; we participated in soil sampling with YYCGD, and tarped new plots to suppress weeds for the subsequent summer. Our outcomes demonstrate the viability of growing abundant food in Calgary's climate, while building soil health and supporting native pollinators through strategic landscape design and land-sharing opportunities (Wezel et al., 2016).

Benefits and Barriers of Urban Farming with The Land

The growing spaces in which RRUF operates are obtained through partnerships with homeowners, businesses, and apartment managers. Accessing land is one of the biggest barriers facing aspiring agrarians, both in urban and rural settings. The ability to arrange land-sharing contracts, which can range from fully donated spaces to affordable leases or barter agreements, opens up the doors for urban farmers to actually make a living. Some homeowners opt for up to two CSA shares in exchange for the land provided. At RRUF's main plot, Michael provides

landscaping and lawn care throughout the season. This arrangement is a fairly minimal burden for an urban farmer, though it can differ from contract to contract. Nevertheless, no-dig SPIN farming requires a high investment in resources (e.g., the compost and mulch that are brought in) and time (e.g., human labour, plant growth, the time it takes to regenerate soil biodiversity). Therefore, the lack of long-term security is a shortcoming of land-sharing where only one partner owns the land.

Michael faced this scenario in 2021, when one plot's homeowners moved and the new buyers wanted the gardens removed. A similar scenario happened to Leaf & Lyre Urban Farms. Although a plot's property owner had the intention of selling their house, the landlord and urban farmers (who had been building the yard's soil for several years) were not informed, so that the yard would continue to appear lush to potential buyers. "I felt used and frustrated, because I put in so much love and attention. I built a relationship with that soil over the course of years; I couldn't just leave it there," said Rod. "I was never the one 'in charge' of the yards with which I built a relationship. There was always the feeling of uncertainty. This was my motivation for collectively buying land for Regenera Ranch; nobody can take it away from me as it is something that I now 'own'."

Another urban farm that has faced similar vulnerability is Grow Calgary, which originally produced its food on city-owned land from 2013 to 2018. When expansions to a major roadway were imminent, the farm was required to find a new location and start from scratch. It took a year to secure a new land partnership, and in spring 2020, the season of my internship, the organization was able to operate once again (Klinke & Samar, 2021b). After four seasons of cultivating and rebuilding infrastructure on this privately owned land in Balzac, just outside municipal bounds, the organization had to relocate again in 2023, as the 73 acres were to be

developed. The farm always knew development of the land was going to happen eventually. Driving in any direction from Calgary, one can see a new neighbourhood or warehouse being built where cropland or pasture once grew. Nevertheless, when I heard this news, my heart sank thinking about all the time, energy, and resources that were poured into the farm by so many people.

Highfield Regenerative Farm and Land of Dreams[69] are two more operations situated on public land, holding municipal and provincial leases, respectively, that allow for the production of food above ground (the former is zoned as a brown site). Neither organization is allowed to alter the landscape in any major way (e.g., digging a well or swales for improved water access, planting or strategically removing trees) nor graze animals to break up the compacted soil caused by heavy machinery. Moreover, neither have reliable access to power or water, which makes the stretches in summer without rain precarious. The renewal of contracts depends on the perceived outcomes of targets outlined in contract agreements, which holds both farms accountable to their intended projects, but leaves them vulnerable to a change in land use. Nevertheless, with creativity, determination, and social organization, all three operations have been able to succeed in growing food *with* the land and in building stronger relationships with the City of Calgary.

> "The world of urban agriculture in Calgary is growing a lot, but there's not a lot of widespread municipal understanding," says Heather of Highfield. "The department we work with gets it; we have a supportive municipal liaison who needs more support themselves to push these agendas forward. But generally, if you're trying to make policy and bylaw changes, that's when you hit walls here and there. Existing as a pilot project of the City puts us [Highfield] in a very unique position where we can comment on certain things, such as best practices in agriculture. When a bylaw was being rewritten, we were consulted to ensure it would not negatively affect us, to make sure Highfield still fits in with the City's plans. We are continuing to report and we still have access to this property, which is amazing, but we aren't sure what other steps of support will be taken by the City. Calgary is years behind Canadian cities like Toronto and Vancouver in policy, execution, and support. Why is that? Is it that we have so much space to

[69] https://www.ccisab.ca/services/urban-farming.html

> sprawl and vast amounts of farmland, that we don't have to get as creative or see the need for urban farming? Although the change here seems slow, it's gaining momentum, and it's exciting to be a part of it! We are seeing things like the City's Circular Economy initiative, the City Composting initiative, and the Urban Hens Program. In the past year in particular (2022-23) a lot of the walls between different organizations and institutions have begun to break down. The network of urban farmers and people looking into food access has also started to come together and collaborate as we work towards a similar vision."

At RRUF, the limitations Michael and I faced for growing on an apartment rooftop were more logistical. To get to the sixteen planter boxes–which were filled by a lift with 1,800 ft3 of soil–we had to squeeze tools, storage bins, and trays of transplants into one elevator and then climb up two flights of stairs. At the top, there was no setup for compost, tool storage, or shade, and the irrigation installed was inefficient. Despite these shortcomings, it was a great experience to grow food alongside the apartment tenants who had their own boxes. With proper architectural design that accounts for weight capacity and accessibility, we argue that integrating more rooftop gardens for growing food and native plants would add ecological and social value to urban centres.

Growing food in between buildings downtown (Figure Set 14) also had its perks and setbacks. The actual space and available parking was quite limited, which meant hauling supplies down several blocks. Since the plots were located on 17th Avenue, an area dotted with bars and restaurants, nothing could be stored at the site itself, as theft was an unfortunate reality. The water source was outside of the locked fence, so installing automated water wasn't feasible, which in turn required more frequent labour. Since quite a bit of shade was cast by the surrounding buildings, we were mindful to plant crops that did not require full sun exposure. The space was maximized with leafy greens, while the sunny rooftop garden overflowed with heat-loving plants. Nevertheless, it was a unique opportunity to grow produce for a restaurant right down the street. Passersby would stop and ask questions and sometimes spontaneously get

involved. Due to the aforementioned challenges with this downtown site, RRUF decided to not renew their contract the following summer. We connected the property owner with a Cree Métis artist and gardening enthusiast, who has since utilized the space for community gatherings.

Figure Set 14: Growing in between buildings downtown (*left* & *right*)

The following summer, 2022, RRUF took on two more YA Apprentices, underwent a rebranding, updated their website and marketing, added an additional ten shareholder spots to their CSA program, and acquired a passive solar greenhouse, which boosted the quantity of heat-loving crops. The farm team harvested a total of 6,127 lbs (2,779 kg), which was broken down into 2,290 lbs (1,038 kg) of roots, 2,909 lbs (1,320 kg) of greens, and 928 lbs (421 kg) of other assorted produce. Of that, 615 lbs (279 kg) were donated to local food access agencies. RRUF welcomed two more YA Apprentices for the 2023 growing season and has continued to slowly build up their customer base, production, and collaborations with other urban farms.

Guided by the principles of regenerative agriculture, this experience showed me how to grow food in our climate while building soil health and supporting native plants and pollinators through landscape design. Nevertheless, being involved in the production and business of small-scale farming illuminated the gap between who can afford and access "happy, healthy food." Farmers market attendees, CSA shareholders, and YYCGD Harvest Box clientele were able to purchase the CAD $7 free-range eggs, CAD $5 carrot bunches, and CAD $4.50 microgreens we offered, but this is not the case for the majority of Calgarians. This is one of the biggest challenges in our global food and farming system: the simultaneous feasibility of supporting economically viable farmers, sustainable or regenerative environments, and sufficient food for all humans.

We also recognize the spatial, temporal, and climatic limitations, as we highlighted a single growing season in Southern Alberta, Canada. Nonetheless, framed within the ethos of "ecological responsibility, social responsibility, and economic viability," we argue how similar regenerative SPIN farming operations can be scaled up and out to not only grow food but ecosystem resilience and community networks. As farmland is blanketed by ever-expanding residential developments and shopping centres, and is increasingly controlled by concentrations of agribusiness, conversations around urban agriculture are more and more relevant. By the end of my apprenticeship, I was still left wondering how food resilience could be strengthened among food-insecure populations while working outside of a capitalist dependency model.

Chapter 6: Growing for the Commons with an Activist Collective

In an epoch marked by globalization, environmental degradation and social inequality, the concept of "the Commons" has gained momentum. The Commons, a term historically rooted in rural agrarian societies, encapsulates the intricate relationship between communal resources and collective stewardship. Transcending physical spaces, it embodies a socio-ecological framework that delineates how communities organize and manage shared resources for sustainable livelihoods (Feinberg et al., 2021). For Paul Chatterton and Andre Pusey (2020), the Commons are a way of exploring alternative forms of social wealth and production based on democratic forms of decision-making and relations of care and compassion. The viability of the Commons faces significant challenges due to external pressures such as industrialization and urban sprawl. These factors not only threaten local ecosystems but also undermine traditional governance structures that have historically facilitated equitable resource distribution.

The "Tragedy of the Commons," a notion propelled by Garrett Hardin (1968), illustrates how individual self-interest can lead to overexploitation when communal resources are inadequately regulated. Hardin, therefore, claimed the necessity of the State or private property management to sustainably manage resources. In the 1980s-90s, Elinor Ostrom and colleagues refuted Hardin's argument, positing how self-organized management based on "debate, discussion, and consensus building" is more efficient than externally imposed governance (Basu et al., 2017; De Angelis, 2014). This debate prevails today, where the Commons is invoked in discussions on environmental conservation, social equity, forms of social (re)production, and resistance to capitalist enclosure vis-avis decommodification (Agrawal & Gibson, 1999; Basu, 2016; De Angelis, 2014; Ruiz-Ballesteros & Gual, 2012).

The decommodification of food, in particular, serves as both an ideological stance against neoliberal capitalism and a practical framework for envisioning more equitable agricultural futures (Henderson, 2004). By recognizing the intrinsic value of food beyond its market price, societies can cultivate more sustainable ecosystems while fostering healthier interpersonal relationships rooted in cooperation and respect for nature. This process entails redefining food not merely as a commodity to be bought and sold but as a vital component of community identity, cultural heritage, and ecological sustainability (Kimmerer, 2024). Playing a pivotal role in this movement are grassroots activist collectives. One of the primary strengths of activist collectives is their ability to engage communities in meaningful ways while challenging existing power structures and prioritizing ecological sustainability (Staples, 2012). This chapter explores the prefigurative politics of a Grower Activist Collective in GFL, focusing on critical urban gardening as a form of social and political engagement. By examining the practices and philosophies underpinning this movement, we can better understand how initiatives seeking a "reCommoning" perform daily acts of resistance and inspire community resilience within urban spaces.

Prefigurative Politics of Critical Urban Gardening

Prefigurative politics represents a compelling theoretical framework that emphasizes the alignment of political action with the desired social outcomes, particularly within grassroots movements (Monticelli, 2021). This approach posits that the means of enacting change must reflect the ends, thereby fostering a coherent relationship between ideology and practice. In essence, prefigurative politics advocates for the embodiment of revolutionary ideals within existing social structures, urging activists to cultivate alternative models of governance and community organization that resonate with their aspirations for justice and equity (Jeffrey &

Dyson, 2021). This paradigm challenges conventional political strategies that often prioritize institutional engagement or electoral processes over direct action and participatory democracy. By foregrounding lived experiences and collective agency, prefigurative politics encourages marginalized communities to forge new pathways toward empowerment. The emphasis on creating microcosms of desired societal change fosters solidarity among members of the Commons while simultaneously critiquing systemic inequalities perpetuated by dominant hegemonies.

Critical urban gardening can serve as a catalyst for such change by creating inclusive spaces that promote intergenerational and intercultural collaboration among diverse groups. In Calgary's Grower Activist Collective, members engage in urban gardening not only to produce food for increased access to fresh produce, but also to foster community connections, advocate for equitable access to resources, and reduce food insecurity. Urban food insecurity is an increasingly prevalent issue that poses significant challenges to the health and well-being of urban populations. Defined as the lack of reliable access to a sufficient quantity of affordable, nutritious food, urban food insecurity is exacerbated by a multitude of factors including economic disparity, systemic racism, and inadequate infrastructure (PROOF, 2020; Tarasuk et al., 2019). Thus, the implications of this case study extend beyond Calgary, offering insights into broader movements for social change through urban agriculture.

This chapter explores how the principles demonstrated by a Grower Activist Collective can inform similar initiatives in other cities facing comparable socio-economic issues. Additionally, it highlights potential challenges faced by such movements in achieving longevity and influence. At the heart of this movement lies an intricate interplay between socio-economic factors and environmental considerations. Through initiatives like critical urban gardening or

cooperative farming models, communities can reclaim agency over their food sources while simultaneously nurturing a social fabric that is critical for fostering communal solidarity.

Vignette by Sara Rodriguez Huenchullan

Human beings are shaped depending on the political, economical, and social reproductions of money. We each live in our own houses, having to provide for ourselves and depend on external resources. Under the colonial way of understanding, the land is treated the same way as the majority of people; to reproduce money. Viewed like any other worker to be exploited, underpaid, stripped of humanity and dignity. Mountains, rivers, and forests are extracted until they can no longer produce and are left to die. It is the same with people. Once you establish the connectivity that exists, in terms of the capitalist colonial agenda, it helps you to empathize with the land and have a different analysis.

How can we teach people how to establish a different kind of relationship with the land and one another? How do we create spaces for Mother Earth to breathe? How do we get away from the corporate markets that offer everything that we have to eat? If we don't change the way people think and act, we will not be able to create a new system. This garden, this piece of land, and those engaged here, are all tools to build a new person in the community; one that will relate as part of the Commons. Everyone could contribute to the work on one another's garden as a collective in order to share the produce later on and with other people in their block. Families could take turns watering the gardens, weeding, removing pests from leaves, and so forth. Generational gaps would be bridged as old and young people come together to share stories and teachings.

Together, we could create activities to learn about soil health, native plants, biodiversity, seed saving, preserving food, and herbal medicines. We would work towards establishing a

completely different model of producing, wherein peoples' needs are met at the community level itself. There would be pride among the people that their system would be more sustainable than current food models. Each year, more people would join after seeing the benefits and acknowledging the gifts they have to affect change.

A Case Study of Urban Farming for the Commons

Getting Organized

While adapting to the ever-changing COVID-19 regulations, my key counterparts Sara and Oscar asked if I could harness my experiential doctoral research to help transform their front-and-back yards into vegetable and medicine gardens as a tool for social change among members of their neighbourhood block. While creating crop plans with Michael at RRUF, I worked with Sara and Oscar to redesign their lawn into a space for plant and community growth, along with hens for eggs. As we walked around the space together, I took notes of their vision, later reflecting it in drawings with lists of required resources and tasks (Figure Set 15). Guided by the twelve core principles of permaculture–which are rooted in Indigenous Ways of Knowing–we first took time to observe and interact with the natural space to learn from it (Caradonna & Apffel-Marglin, 2018). Where is there full sun, partial sun/shade, and complete shade? How does snowmelt and rain flow across the topography? Who are our avian, mammalian, and insect neighbours? We discussed strategies for catching and storing energy (i.e., rainwater barrels and solar panels), encouraging a variety of species (i.e., bumblebee boxes, organic matter piles and mixed flowers), and prioritizing sustainable resources (i.e., mulched pathways, compost and low-to-no machinery). Starting with broad patterns that we refined into details, we considered what plants

grow well in our Zone 3 climate and how we could integrate companion planting and rotations for natural pest management.

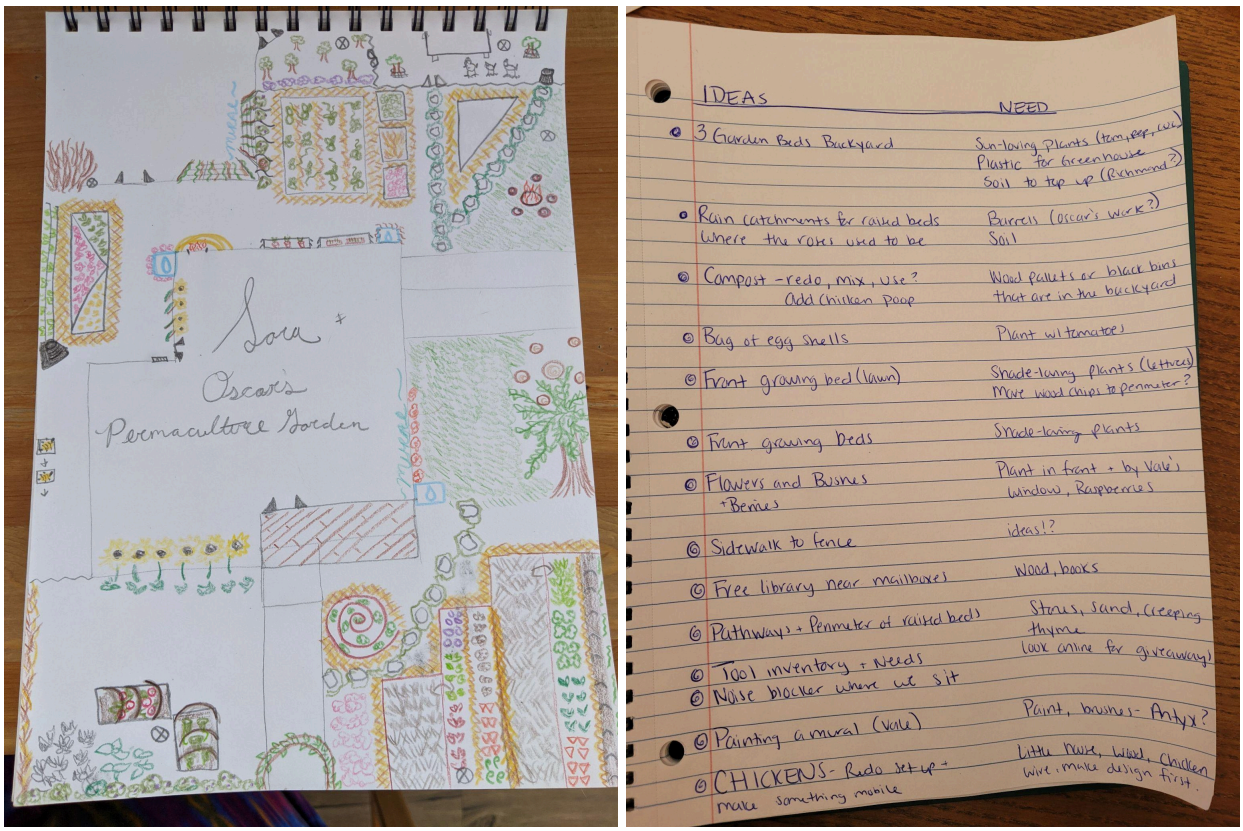

Figure Set 15: Co-designing an urban garden (*left* & *right*)

From the onset, it was important to not rely on grants to achieve our goals, but to rebuild the relational fabric among neighbours and those within our rural and urban agrarian networks. When our farming friends–Richmond Godfrey of Regenera Ranch, Corinne and Darrel of Winter's Turkeys Farm, and Michael from RRUF–would visit for dinner, they would contribute to the designs. "Have you considered adding a hedgerow of native perennial bushes?" and, "the roots from that Spruce tree will soak up a lot of the available groundwater. You should plant crops that don't require a lot of moisture in that front patch." Always open to feedback, we implemented gradual and manageable changes while aiming to reuse and recycle wherever possible. Corinne and friends at the UCalgary Community Garden gifted seeds for vegetables,

flowers, medicinal plants, and cover crops (Figure Set 16). Richmond built raised beds and brought truckloads of organic compost for us to sift and fill them. Wood chips for mulch pathways were donated by one of the city's arborist companies. Another friend helped Oscar build a chicken coop, while Michael set up a two-compartment compost system, prepared rows with his broadfork and Jang seeder, and brought carloads of discarded pallets, cardboard for under the mulch, and tires for planters.

Figure Set 16: Gathering seeds (*left*) & recycled cardboard (*right*) for the garden

Come Spring, I moved two blocks down from Sara and Oscar so we could begin organizing the gardens and raising awareness via weekly walkabouts (*pasear* in Spanish). With baskets full of Oscar's homemade rolls and our dogs in tow, Sara and I began visiting neighbours. If families were playing outside or working in their home gardens, we would introduce ourselves and strike up a conversation. Braver than me, Sara even knocked on doors. At times we were met with hesitancy, but more often we were invited in to continue the discussion. Soon, families began visiting Sara and Oscar's house to see the gardens and chickens, learn more about the initiative and my research, and to get involved. While some curious neighbours came only once, others came again and again, bringing lawn clippings to add to the compost or raspberry cuttings to plant along the property's edge. They donated old tools,

brought kitchen scraps for the chickens, moved mulch onto the pathways, and weeded the strawberry bed. When Sara sent them home with fresh eggs or produce, some returned with potted tomatoes and homemade meals. The children of the community began to say to their parents, "let's go to Sara's farm!" From youth to elders and everyone in between, people contributed their own ideas to the space. Many expressed a sense of belonging and empowerment. Over the course of one summer, we transformed a grassy lawn that was not necessarily welcoming into a vibrant space for growing food, medicines, biodiversity, and community (Figure Set 17).

Figure Set 17: Turning a lawn into a community growing space, before (*left*) & after (*right*)

Sara, Oscar, and I began to organize monthly gatherings with a group of community members passionate about food resilience, sustainable farming, and grassroots organization (Figure Set 18). Many conversations centered around the question: how can we create solutions as a community to overcome our common struggles? These circles continued into the winter months as we prepared for the subsequent growing season, including seed preferences and means of acquisition. This burgeoning "Grower Activist Collective" was, and still is, flexible in terms of membership, degree of participation, and prior agricultural knowledge. Some people had backgrounds in horticulture or came from farming families, while others were entirely new to

cultivation. Some were apartment renters or homeowners and others were transient; there were university students, working professionals, caregivers, and unemployed individuals. One gathering or group work day may have had over twenty people attend, while another only four. Regardless of age, gender identity, ethnicity, sexual orientation, faith, or other social location indicator, everyone contributed ideas and skills to the collective.

Figure Set 18: Gathering as an Activist Collective (*left* & *right*)

From the onset of building relationships in GFL, I was transparent with my roles as a community member, farmer, and academic. Sara, Oscar, and I were also clear how the methodologies within my dissertation were just one part of a wider social-political movement that extends far beyond my research (Casas-Cortés et al., 2008). Alongside my key counterparts, we engaged members of the Activist Collective not only in experiential farming and group sharing circles, but farm exchanges and storytelling to grow a more resilient local food system, increase intercultural understanding, and build political education among our neighbours. Sara and Oscar express how "these are activities that we know will add depth and meaning to our movement. We felt strongly about departing from colonial methodologies like surveys and structured interviews to ones where we could truly tell our stories and learn from generational farmers and the lands we live on."

During these activities, we reflected upon and evaluated our means of organization, our barriers and opportunities, the dynamics of growing food in a collaborative way, and our capacity as a community-guided food network to meet wider societal needs (Blay-Palmer et al., 2013; Derickson, 2016). We considered what went well and not so well, what supports people needed, and what we learned from each experience by asking: To what extent can anti-capitalist cultivation enhance food justice? How can we co-create a different kind of model where locally produced food can be accessible to everybody? How can we rekindle more reciprocal relationships in all sectors of society, not just food?

In an effort to revive an ideology of the Commons, the Activist Collective sowed, harvested, and shared what we grew in our "flipped yards." Unlike dominant and alternative food networks that function within capitalist modes of production and market economies, our intention was to decommodify food through traditional localism and, in effect, reduce debt and dependency among neighbours. According to Jesse McEntee (2011), traditional localism is an engagement of "non-capitalist, decommodified means that are affordable and accessible" where "food is grown/raised/hunted, not with the intention to gain profit, but to obtain fresh and affordable food" (p. 254–255). The decommodification of food represents a significant shift in contemporary agricultural practices and social interactions, challenging the prevailing paradigms of capitalist commodification that have traditionally governed food production and consumption. By prioritizing local agriculture, community-supported initiatives, and sustainable farming practices over industrial-scale production systems, the Grower Activist Collective sought to foster relationships that emphasize mutual aid and collective well-being rather than profit maximization.

Outcomes and Discussion of 'reCommoning'

Working shoulder-to-shoulder with members of the Grower Activist Collective to build technical skills in urban gardening led to an increase in access, security, and agency over locally grown foods, medicines, and seeds (Table 7). Each growing season, we saved heirloom seeds and cuttings to plant for the next year and to add to a community seed library at Sara and Oscar's house. This living library is part of a broader regional effort to steward open-pollinated seeds. Each Spring, several members of the Collective attend Calgary's Seedy Saturday, an event part of the worldwide Seedy Saturday/Sunday that celebrates open-pollinated seeds. "As large commercial seed companies consolidate and only offer more hybrids and patented varieties, we are increasingly losing the regionally adapted collections that have developed in our unique prairie climate."[70] Beyond exchanging and selling seeds, Seedy Saturday is a space to learn about and network with practitioners involved in vermicompost, beekeeping and supporting native bees, mushroom cultivation, and more. The Collective also gathered a variety of mulches, including hemp, straw, and dried wood chips, for free from around the city in preparation for covering the soil around budding seedlings.

	Seeds or Cuttings in Research Network
Vegetables & Fruits	• Arugula, Bean (Amish Nuttle, Appaloosa, Jacob's Cattle, Jesse Fisk, Magpie, Molasses Face, Nicaraguan Black Turtle, Swedish Brown, Tiger's Eye), Fava Bean, Beet, Broccolini, Cabbage, Carrot, Collard, Concord Grape, Corn, Cucumber, Endive, Fennel, Garlic, Green Onion, Haskap, Kale, Kohlrabi, Leek, Lettuce, Misuna, Onion, Pea, Pepper, Potato, Radish, Raspberry, Rhubarb, Spinach, Squash, Strawberry, Sugar Pumpkin, Sunchoke, Swiss Chard, Tomatillo, Tomato, Turnip, Zucchini
Grains	• Arabian Blue Barley, Bere Barley, Baton Hulless Oat, Black-tipped Durum Wheat, Golden Oilseed Flax, Pembina Wheat, Prelude Wheat
Herbs	• Basil, Cilantro, Coriander, Cress, Dill, Lovage, Parsley
Flowering &	• Amaranth, Aster, Bergamot, Black Oil Sunflower, Borage, Buckwheat, Calendula,

[70] http://www.calgaryseedysaturday.ca/

Medicinal Plants	Catnip, Chamomile, Chicory, Comfrey, Common Mallow, Cosmo, Delphinium, Echinacea, Fleabane, Fireweed, Gaillardia, Heliopsis, Hollyhock, Horehound, Iris, Lavender, Lupin, Maral Root, Marshmallow, Motherwort, Mullen, Nasturtium, Nigella, Oregano, Oriental Poppy, Peppermint, Perennial Flax, Prairie Coneflower, Prickly Pear Cactus, Quinoa, Rhodiola, Rudbeckia, Salvias, Shasta Daisy, Siberian Ginseng, Siberian Squill, St. John's Wort, Sunflower, Tall Lungwort, Tobacco, Yarrow, Valerian, Veronica, Vetch, Wild Mint, Wild Rose

Table 7: Research Network of Seeds & Cuttings

In addition to growing a low-tilled plot for root crops, raised beds for produce and herbs, annual and perennial flowers, medicinal plants, and a small flock of hens, the Grower Activist Collective learned about the medicinal properties of plants, many of which we planted in the urban garden. Farm exchanges provided other opportunities for deepening our relationships with the land and ecosystem. Members of the Activist Collective grew their understanding of climatic pressures facing urban and rural farmers alike. We also learned more about provincial and municipal agrarian policies that place restrictions on farmers, including zoning and land use bylaws, inspection and slaughter regulations, transport and distribution laws, and a dependency on the capitalist economy.

The relational approach inherent within "reCommoning" not only enhanced food security by encouraging local resilience but also cultivated awareness regarding the environmental costs associated with conventional agriculture, such as biodiversity loss and soil degradation. By employing regenerative principles and sustainable urban farming techniques, the Grower Activist Collective demonstrated alternatives to industrial agriculture that are more environmentally friendly. These methods helped restore soil health, conserve water, and promote biodiversity in an urban setting. In doing so, we not only addressed immediate environmental concerns but also educated our communities on the importance of preserving natural resources for future generations. Our efforts for critical urban gardening served as a platform for addressing issues such as access to fresh produce in a marginalized community, and created a space where

individuals could participate actively in food production, thus enhancing local food growing skills and strengthening social ties among participants.

As members worked together towards common goals, we cultivated a sense of belonging and shared responsibility that is essential for community resilience. The Grower Activist Collective also emphasized the value of intergenerational knowledge exchanges, creating opportunities for children, adults, and elders to learn from and care for one another (Akbulut, 2017). While gathering for group work days, farm exchanges, sharing circles, or storytelling sessions, children would actively participate in sowing seeds, feeding the chickens, etc. while honing their critical thinking, interpersonal skills, and creativity. As part of a reCommoning, trust was built among neighbours to watch one another's children and pets, water plants if someone was away, or care for one another when we fell ill. If someone's car broke down, we helped them get where they needed to go. Sitting around Sara and Oscar's dinner table or underneath their spruce tree, members of the Collective sang songs and created political exhibits. We shared meals together, as well as recipes, burdens, accomplishments, and lots of laughter. By implementing sustainable practices that reflected our shared values, the prefigurative politics and applied work of the Grower Activist Collective emphasized the importance of embodying our desired future within present actions.

Limitations and Contradictions

Agrarian scholar Bryan Dale emphasizes how, "educational activities that highlight why it is important to leave capitalism behind must be coupled with a demonstration of the fact that alternative socio-economic arrangements are not only desirable but also possible" (2021, p. 5). While the Grower Activist Collective has had many successes, it has also faced challenges. For one, the urban gardening initiative began during a pandemic, when social distancing and

isolation rules were in flux. To ensure everyone's health and safety, group work days and sharing circles took place outdoors in small groups. Depending on the wave and severity of the virus, it could be difficult to organize these group activities, host larger gatherings, and engage more neighbours. Some passersby were hesitant to approach us as we worked in the gardens; likewise, some neighbours did not feel comfortable opening the door when Sara and I made our walkabouts. Several members of the Collective wore masks for every activity, while others chose to remain unvaccinated. Due to respiratory health conditions, Sara and Oscar found it difficult to remain in a small contact bubble while yearning to engage more of the community, as they have their whole lives.

Besides the pandemic, frequent participation (i.e., more than one day a week) among members of the Collective was limited by the demands of work, school, childcare, summer camps, visiting family, vacations, emergencies, and other health concerns. Some people expressed how they were too tired by the end of their workday to engage in manual labour, creative activities, or discuss the politics of the system. It could be challenging to find common times that worked for group work days, so we organized monthly gatherings and an open door policy where neighbours could stop by at their convenience. These challenges resulted in a few individuals doing most of the upkeep (i.e., watering, weeding, thinning, light harvesting) and scaling down the initial vision for the space. In the beginning, one shared idea was for there to be a network of urban gardens that would be managed cooperatively. For instance, one yard would be flipped into a plot of potatoes, kale, and borage; another into carrots, lettuce, and calendula; beets, sunflowers, and yarrow would be planted in a third, and so forth. Compost, seeds, irrigation, and tools would be gathered in bulk for all yards and then labour would be organized

collectively. Due to the aforementioned challenges, the Commons garden was limited to Sara and Oscar's home, with other neighbours maintaining personal gardens.

Because community engagement and action plans had to move slowly, we were able to dedicate more time to relationship-building and political education. Too often, initiatives begin with a creative spark, apply for funding, and implement projects quickly so they can report back to funders. Slowing down for cycles of reflection and evaluation grounded our approach to engaging with community and the land. Early on, the Grower Activist Collective acknowledged the contradiction of situating a reCommoning within a private property regime. When an idea was put forth to request access to cultivate a City-owned park in the neighbourhood, we considered how that could potentially hinder Indigenous work toward land reclamation. In their article, 'Decolonization is not a metaphor', authors Eve Tuck and Wayne Yang (2012) assert how "decolonization in the settler colonial context must involve the repatriation of land simultaneous to the recognition of how land and relations to land have always already been differently understood and enacted" (p. 7). Through sharing circles, the Collective reflected upon the possibilities and challenges for regenerative farming to be informed by place-specific cultural knowledge systems, while questioning how our place-making efforts reinforce or dismantle de/colonization. We asked one another: What would a decommodified food system truly look like? What strategies could be proposed to decommodify food in a capitalist economy? How could private land ownership and resource control transition to collective management?

Despite the aforementioned challenges, this case study demonstrates that it *is* possible to cultivate spaces for growing plants and community outside of a funding model, and distinct from more individualized City Community Gardens that often lack a political agenda. It is important that the Grower Activist Collective not be fixed in time; the work is ongoing and ever-evolving.

Neighbours come and go, priorities and health statuses change. Over the course of the following growing seasons (2022-24), my participation in the Activist Collective continued, although I was less involved in direct leadership responsibilities. This was to ensure that project activities would continue to be spearheaded by other community members as I conducted further research in the countryside. Throughout the seasons, I continued to share knowledge with the Collective on seed-saving and growing for Zone 3, organized more farm exchanges, and co-presented with Sara at academic conferences and in undergraduate courses. Future visions for the Grower Activist Collective in GFL include a cultural festival held in the neighbourhood block, a political mural and theatrical performance, and a patchwork of urban cover crops and rotational grazing with chickens. What remains consistent is the importance of organization, participation, education, and creativity to mobilize power among the grassroots.

Concluding Thoughts

Grounded in the belief that "healthy, happy, locally-grown food" should not only be accessible to society's privileged sector, the Grower Activist Collective of GFL represents a transformative path toward sustainable living. By fostering community engagement, promoting ecological practices, and challenging inequitable systems of power, the Commons exemplify how grassroots action can lead to meaningful change. As society continues to grapple with pressing issues like climate change and social justice, this case study of critical urban gardening offers an approach to activism that is both practical and visionary. Ultimately, it underscores the needs for continued support for grassroots movements that prioritize sustainability and equity in urban environments. While navigating individual needs against collective well-being, critical urban gardening for the Commons can enable communities to optimize cooperative resource use while mitigating the risks associated with environmental uncertainties. Through cooperative practices such as

communal decision-making, resource sharing, and inclusive participation, activist growers can craft environments that not only contest existing paradigms but also exemplify alternative possibilities for social relations.

"Overall, things are simple; take away the complications," urges Sara. "We need to get organized from the bottom and empower people to collectively fight back and create change. Kindle your revolutionary fires!"

Chapter 7: Growing for Meaningful Connections with Rural Producers

This chapter draws upon my research collaborations with three rural regenerative farms–Happiness by the Acre, Regenera Ranch, and Winter's Turkeys Farm–to analyze the ways in which farmers grow food for economic viability, ecological sustainability, and social relationships. From a multi-year process of EXL and storytelling, a pattern of relationality emerged: growing for meaningful connections among fellow producers, among organizations and institutions, among consumers, and among the broader community. While there is no singular definition constituting 'meaningful connections'–as meaning is subjective and connections are variable–in this research it signifies relationships that are deemed significant and include mutual respect, trust, interest, value, and positive regard. A meaningful connection is mutually beneficial, with both parties receiving something from the relationship. Forming a meaningful connection requires engagement, empathy, honesty, and effort to break through superficial boundaries and foster deep social ties. These connections can create a sense of belonging and can lead to a more resilient social fabric.

Informing my research on relational foodways is an extensive body of literature on social change, cooperation, communalism, and reciprocity. While I cannot give each concept sufficient justice, I foreground this chapter with their theoretical pillars. Literature on social change can guide an understanding of how food-related practices, traditions, and innovations influence broader societal shifts, such as movements for food sovereignty, sustainable agriculture, or anti-colonial food practices ("Food as a Tool for Social Change," 2021; Motta & Martín, 2021). Social theory can help unpack cultural symbols and social practices related to food (Neuman, 2019), explain popular feminism and visions of feminist food justice (Conway, 2018; Sachs & Patel-Campillo, 2014), unpack national cuisines and culinary subjectivities (Martín, 2021), and

frame transformative social action (Kondo, 2021). While growing for meaningful connections among rural producers, I consider how relational foodways challenge or reinforce existing power structures, how food practices can be used to address social inequalities, and the extent to which regenerative farming can be a catalyst for social change.

One theoretical rhizome of social movement theory is cooperation. From cross-cultural community gardening projects to organizing food drives, the literature on cooperation helps analyze how shared goals around food production and consumption promote interdependence, "more-than-economic" benefits, and emancipatory potential (Emery et al., 2017). At the micro familial level, Benedetta Cappellini and Elizabeth Parsons (2012) find how mealtime patterning involving collective participation in saving, spending, and preparing meals contributes to social cohesion and family identity through gifting and mutual sacrifice. Interpersonal food behaviours and their associated reinforcement of social bonding are made visible at the community level through food rituals and food-sharing ceremonies (i.e., potlatches and potlucks), which function to nurture trust, empathy, and cooperation (Johnsen, 2024; Woolley & Fishbach, 2019). Along similar lines, the concept of communalism offers a framework to examine how relational foodways prioritize the collective over the individual, ensuring resources and access to land are shared equitably (Caffentzis & Federici, 2014).

Fundamental to cooperation and communalism is reciprocity. This concept can frame how food is grown, harvested, prepared, and shared in ways that sustain ecosystems and human communities. Its application may explore how reciprocal food practices honour mutual dependence between humans and the environment, or investigate how reciprocity manifests in urban settings, like food-sharing networks or zero-waste initiatives (Jones & Tobin, 2018; Ojeda et al., 2022). While investigating processes of relationship-building through agrarian practices, I

reflect on how cooperative foodways strengthen community bonds, how communal foodways resist commodification, the challenges and solutions that arise in cooperative food initiatives, and the role of reciprocity in growing for meaningful connections among rural producers. Next, I use storytelling to trace the histories, actors, and approaches of three rural regenerative farms. Bringing them into conversation with one another, I then analyze the political, socio-economic, gendered, ecological, and cultural-spiritual factors challenging the extent to which farmers engage in relational foodways. Finally, this chapter concludes with an exploration of the opportunities and barriers for regenerative agrarian alliances seeking food system transformation in Wild Rose Country.

Happiness by the Acre

Sarah and Marcus Riedner are first generation farmers who operate HBTA, a 153-acre regenerative mixed farm near Carstairs, Alberta. With backgrounds in technology, design, and urban SPIN farming, the seeds of their passion for agriculture were planted in their parents' and grandparents' gardens. "I have an environmentalist background. Ya know- save the trees and whales," laughs Marcus. "As I grew up, it became apparent that if we [humans] were to have any sort of long-term viability, we would need to figure out how to raise food in a manner that wasn't replacing ecosystems, but was partnering with them. This led me to learn about permaculture, organic farming, regenerative, you name it." When the couple started thinking about their plans to start a family, they wanted to be able to teach their children where their food comes from, how it grows, the work that goes into it, and how to care for creation. This idea was further motivated by the number of small farms dying off, the changing regulations that were making it harder for small farms to exist in Canada, and the loss of agricultural knowledge from generation to generation.

"We originally thought about homesteading to just provide for ourselves and our close friends," says Sarah, "but we had a passion to see if and how we could regenerate a piece of land." When thinking about what type of farming they would want to do, they were intentional about choosing a path of regenerative, small-scale, mixed farming that would contribute to the reversal of climate change and improve the health of the land (Altieri et al., 2015). They were also eager to get out of the office and improve both their physical and mental health. "We didn't want to use pesticides, herbicides or fertilizers," she goes on. "We knew that the only way to start improving soil health was to use animals (Figure Set 19), but it was important to do so ethically; in a way that would be better for the livestock, for the environment, for farmers, and for consumers."

Figure Set 19: Small-scale mixed farming at HBTA (*left* & *right*)

In 2013, Sarah and Marcus purchased the quarter section, which has a mixture of forested, riparian, and crop land. For decades, it had been farmed in wheat, canola, pulse rotations using low to no-till conventional methods. It was apparent that pesticides, herbicides, and large machinery had contributed to moderate to high soil compaction, low organic matter (OM) (0.5% +/- 0.25%), and the resulting pioneer populations of thistles, dandelions, and quackgrass. A low population of amphibians was one of the early signs that there were also

agrochemical runoff issues in the riparian areas. For a few years, Sarah and Marcus did not implement any projects so that they could take the necessary time to observe the local ecosystem throughout the seasons and understand how to work with it rather than fight against it. What other critters call this land their home? How does water flow on the topography? What is the wind and sun exposure like? Asking these questions at the beginning, and on an ongoing basis, helps producers design a farm that is not only efficient but ecologically conscious. Marcus puts it like this:

> "Regenerative agriculture starts with understanding how ecosystems function and the role that homosapiens play in that ecosystem that we are a part of. When it comes to partnering with livestock, the soil, and the biological food web, it's about holistic management. The relationship between myself pulling the chicken coop to a new spot every week and the grass, chickens, eggs, and customers in Calgary who send the carton back to us, it's a participatory, guided partnership. From that foundation and conceptual understanding is where our ethics stems from."

At the time of purchase, there was no infrastructure, fencing, irrigation, machinery, or dwelling. For almost a decade, they commuted an hour to and from their home in the city, staying in a loft over the garage they built in 2018 (which now brings in revenue as an Airbnb). Now with a second son, the family resides 15 minutes away in Didsbury. After bringing in a sea-can for storage, the first big project was to plant a permaculture forest. Chives, lovage, rhubarb, asparagus, hyssop, sorrel, and hazelnut were planted together along contoured swales. Apples, plums, apricots, saskatoons, raspberries, and buffalo berries also joined the community. Unfortunately, three elements prevented this concept from thriving: browsing pressure from resident moose and deer; a hearty colony of thistle, toadflax, and dandelion; and insufficient moisture for the swales to catch. The farm is still able to gather chive blossoms and raspberries each summer, but most fruit trees did not survive. "Regenerative practices need to be tailored to

what it's like on your land," states Marcus. "This project taught us that there cannot be a set of rules that apply universally or even by Zone."

In those first few years, the Riedners also began reseeding 130 acres to perennial pasture, connected to the electrical grid, put in a gravel road, excavated a dugout to capture snowmelt, and installed high-tensile electric perimeter and cross-fencing. This was made possible through a partnership with Agriculture Alberta, and would help keep the natural areas, riparian ecosystem, and future livestock safe while allowing for easy wildlife movement through the property. In partnership with a nearby rancher, the Riedners struck up a deal to custom graze part of his cow-calf operation using regenerative techniques. He connected the family with his veterinarian daughter, and still cuts hay from the property's alfalfa, fescue, and grass pastures for winter feed. "You don't necessarily need to own your own land, equipment, and animals, especially as a first generation farmer. You can lease someone else's land or graze someone else's cattle, borrow equipment from a nearby farmer or do a trade. It's all about making connections in the community," says Sarah. Down the line, another fruitful connection would be with nearby Whispering Wind Farms, who became mentors for raising Kunekune pigs.

Before cattle could arrive, the farm had to first build an irrigation system and corrals, and install a solar-powered automated water trough hooked up to the dugout. Needing an extra pair of hands, they hired an Olds College Horticulture student, Lachlan Wichert, to be their full-time farmhand. In 2018, while constructing a large barn, the team took on their first batch of 25 hybrid layers to rotate on pasture. Two years later, they planted a 3-kilometre ecobuffer that winds its way through the middle of the property. Designed with the long-term plan to attract birds, create habitat, provide shade, and catch moisture, the windbreak consists of varieties of lilac, poplar, and willow. Nestled in front of the shelterbelt are native willows, dogwood,

gooseberry, wild rose, currants, poplar, hawthorne, oak trees, cherry, buffalo berry, and sea buckthorn. Due to consecutive years of drought, the 6,500 or so trees and shrubs have taken a while to get established, but are steadily putting on growth.

"With each year and new project, we look towards future generations; for our own family or whoever will take over after us," reflects Sarah. "Whether we are sowing cover crops or building a small passive-solar greenhouse for a market garden, our actions are guided by well-being more than a business mindset." Within an ethical farming framework (Table 8), HBTA's motto became 'healthy, fresh, local'.

	Ethical Farming Practices	
Livestock	• Plenty of space • Healthy food • Enrichment • Low-stress handling • Quick, humane death	• Live outside as much as possible • No physical alterations (debeaking) • Veterinary assistance when needed • Consider medication when ill • Euthanization when suffering
Environment	• Improving soil health • Rebuilding biodiversity • Carbon-sequestration • Selling local reduces food travel & emissions	• Working with nature, not against it • Often focused on pasture-based • Less impact on natural areas • Maintain connection between all the living systems
Farmers	• Deep satisfaction for their work • Deeply rooted in the ecosystem • Intensely connected with their lives	• Often directly connected with their customers • Concerned for what is right over what is easily profitable
Consumers	• Peace-of-mind for consumers • Increased nutrient-density • Supports & encourages ethical eaters	• Pasture-raised animals produce healthier products • No risk of growth hormones or antibiotics

Table 8: Ethical Farming Practices at HBTA

Spirituality also plays a pivotal role in the Riedners' approach to agriculture, Sarah describes:

> "We have a deeply spiritual connection to the animals. Our animals come first and we strive to provide them with deep care. They are not just an item for us to sell; they are living individuals with personalities and are all unique. On our farm, a chicken is fully a chicken for the time that it lives. The same for our cows, ducks, and pigs. It can be heart-wrenching when an animal gets sick or injured and needs

> to be culled or when we find a hen dragged off by a predator. It has been a learning curve of all the ways chickens, in particular, can die. When and how to treat frostbite, mites, and prolapses, or administer medicines, wrap bandages, and soak in epsom salt baths. Sometimes we have to go 30 days without selling eggs so a medication can run its course. But those eggs can go to the pigs, along with cracked ones. It is a crash course of learning every day as you go along, but that's the most rewarding part!"

As founding farmer members of YYCGD–of which Marcus served on the Board of Directors for about two years–they began distributing their free-range chicken and duck eggs to the collective for their CSA Harvest Boxes and farmers market stands. In time, HBTA built out a customer base for direct egg subscriptions and expanded to an online farm store, on-farm store, and local food markets, such as The Farm Table in Carstairs. After integrating ducks, heritage breed Kunekune pigs, steer (a mix of Hereford, Angus, and Simmental), and Mistral Gris broilers, their sales became more diversified (Figure Set 20). One can now purchase pasture-raised poultry, duck eggs, chicken and pullet eggs, a half or quarter of antibiotic-free grass-fed beef, and a variety of pastured pork products.

Figure Set 20: Duck eggs (*left*) & Kunekune pigs (*right*) at HBTA

In the short time the Riedners have been on this land, they have seen it transform from heavy tilled, hard-packed soil with pockets of 0.5% OM to vibrant pasture with mixed species of plants, insects, croaking toads and salamanders, and native fauna (Table 9). “After two seasons of intensive grazing with cattle, we were up to 2% OM across the farm,” Marcus remarks with pride. “After four years, we were averaging 7-10% OM in the top 6” of soil. That was our 25-year plan! So now, our goal is to reach 15% OM in the top 6” and get to double-digits of OM down to 18” in the soil.” A healthy soil biology is integral for binding carbon out of the atmosphere. According to Marcus, after taking out cow burps, tractors, electricity, and hauling in feed for chickens, HBTA bound approximately 7,500 metric tons of carbon over four years.

	Regenerative Practice & Observations
Key Practices	• Reduced tillage: Minimum-till; Permanent grassland • Soil cover: Cover crops; Organic mulch • Biodiversity: Intercropping; Companion cropping; Relay cropping; Diverse crop rotations; Pollinator buffers; Habitat conservation/creation/restoration • Agroforestry and perennials: Windbreaks Riparian buffers; Native perennial vegetation conservation • Water management: Water conservation; Wetland restoration • Organic inputs: Compost; Manure • Integrating livestock: Adaptive multi-paddock grazing; Bale grazing; Pastured pigs or poultry; Mob grazing
Key Observations	• OM from 0.5-2% to 7-10% range in 4 yrs. • Increased amphibian population • Increased carrying capacity in pastures • Improved depth of soil • Improved texture of soil • Increased bird populations • Increased revenue per acre

Table 9: Key Regenerative Practices & Observations at HBTA[71]

To further reduce emissions, HBTA invested in enough solar panels to generate power for the entire operation year-round. Despite the government's push for renewable energy transitions, and the couple's effort to apply for grants and rebates, the small-scale farm was unable to receive financial support. Another hurdle for the Riedners is the inability to monetize their carbon renewal, since they are raising livestock. "In 2022 alone, I estimated that the market value for the carbon we bound was around CAD $300,000. My hope is that the government gives farmers direct access to the taxable pool for the carbon tax, which is an accelerating price over time," says a skeptically optimistic Marcus. They are also interested in supplementing their beef cattle's mineral feed with kelp to reduce methane emissions, but it is not yet widely commercialized or approved by the Canada Food Inspection Agency (Agriculture and Agri-Food Canada, 2024). Another approval difficult for many small-scale farmers to obtain is organic certification. In addition to the high associated costs, farmers who supplement livestock feed with "food waste"

[71] Information collected from EXL and Regeneration Canada at https://regenerationcanada.org/en/happiness-acre/.

from rescue programs such as Loop Resource are ineligible to claim organic. Therefore, since there is no equivalent regenerative or holistic management certification in Canada, farms such as HBTA must rely on building strong, transparent relationships directly with their customers.

Although community-building efforts were challenged during COVID-19 and a subsequent Avian Influenza outbreak, the farm was able to quickly adapt. For instance, the pandemic reinforced a societal norm of home deliveries. To avoid losing customers, HBTA began offering home deliveries twice a week. This task, however, became burdensome and unsustainable; after several years, they switched to egg collection boxes for CSA customers around the city. Alberta Open Farm Days–a province-wide celebration where participating farms open their doors to hundreds of Albertans–was also impacted during the pandemic. This annual event is an incubator for agri-tourism and rural sustainability, an educational and economic opportunity, and a platform for local vendors to collaborate. Fortunately, most farms, including HBTA, have been able to recover and reconnect with other producers.

In the spirit of relationality, HBTA partners with and promotes fellow producers via their online farm store, on-farm store, CSA delivery system, and at a weekly farmers market. In the on-farm store, one can find HBTA merchandise, educational activity packs, locally made waffle and pancake mix, prints and books featuring local authors and artists, and small batch MOB honey (who used to tend an apiary on the farm before purchasing land south of Calgary). Sarah and Marcus are founding members of Mountain View Growers (established in 2023), marketing their products alongside Little Loaves Farm's grass-fed yak, Soil & Sage's greenhouse produce and spice blends, and West Quarter Farms' field vegetables, haskap berries, and cut flowers (Figure Set 21). Both Soil & Sage and West Quarter Farms operate their businesses, in part, on the HBTA quarter section, in addition to several other aspiring regenerative farmers and

beekeepers. From a strong professional and personal foundation of trust and mutual respect, Sarah and Marcus are happy to share their land with other producers and build a community of pluriactivity.

Figure Set 21: West Quarter Farms' land-sharing market garden (*left* & *right*)

The collective of regenerative farmers at HBTA share costs (e.g., gasoline, seeds, row cover, repairs), equipment (e.g., Kubota tractor, BCS, electric ATVs, garden tools), and resources (e.g., dugout water, solar energy, compost). While many purchases and tasks are still independent of one another, there are ongoing exchanges. For instance, by 2025 there will be an estimated seven people cultivating the 1-acre market garden, half of which will be in a cover crop rotation. Sarah and Marcus do not charge the producers rent; rather, informal reciprocity takes the form of volunteering at Open Farm Days, establishing an agri-tourism u-pick, and building back soil health and native pollinator presence. Acts of collective care look like securing row cover on the brassicas during a windstorm or turning on drip irrigation for all beds when someone cannot make the drive over. Everyone keeps an eye out for one another.

Some members also work as formal farmhands for HBTA, while others work in exchange for animal or egg shares. This used to be the case for me and Lachlan, who introduced me to HBTA in 2021. For the first year, I would join him for a work day every other week, in between

my 20-hour YAA with RRUF and community gardening with Sara and Oscar in GFL. At the time, he grew his own market garden and owned a portion of the poultry and egg-laying flocks. The following spring, Lachlan and I formalized our business, West Quarter Farms. In addition to growing a 1-acre haskap orchard on Lachlan's family's land in the Wildcat foothills, we would drive up to HBTA twice a week to complete chores in exchange for a share of poultry and egg-layers. After meeting the minimum hours to cover our birds' costs, we could either bank more hours or work in our market garden on the property. With a baby on the way in 2023, Lachlan and I opted out of an animal share to reduce our workload and focus on the garden. We are still welcome to visit with the animals, and the door is always open to return to owning a share of livestock another year. This kind of flexibility, mutually beneficial cooperation, and land-sharing arrangement makes it possible for young, aspiring, and established small-scale producers to pursue their interests in regenerative agriculture, establish their businesses, and foster relationships with other farmers in the area.

Regenera Ranch

On the other side of the QEII, approximately 25 minutes east of HBTA, is Regenera Ranch. Collectively owned by several men, the land is a touch under a quarter section. One of the co-owners, Richmond Godfrey, said that financing Regenera is not something he could have done on his own, nor without clear-cut grazing work he did in northern B.C.

> "The diverse forage in B.C. provided a foundation for my current flock of sheep, who have been able to do well on rougher grazing surfaces. Before I moved to Regenera, I had been grazing my flock on pastures around Olds, Bergen, and De Winton (Figure Set 22). It was a huge relief to have a place where I could stay home and really be in touch throughout the day with my sheep, without having to travel any distance. I could step outside and know what was going on with the grazing."

Figure Set 22: Leasing pasture in De Winton (*left*); daybreak at Regenera Ranch (*right*)

For most of its existence, Regenera was a cattle ranch that claimed to have used Allan Savory's Holistic Management approach. However, during Richmond's first year living on the property, he observed more of a clumsy management of the pasture and water sources. The remaining cattle would tromp up and down the banks of the Rosebud River, and the hay fields were left to the gophers, moles, and badgers (Figure Set 23). This proved to be a challenge for cutting hay, as the bumpy terrain slows you down and poses a risk to machinery and its operator. Once the ground thaws, Richmond plans to smooth out the hills using auctioned equipment. While pulling light discs and harrows with his small tractor, he will also seed legumes (e.g., birdsfoot trefoil and sweet clover) for surface cultivation to improve pasture production. "There is no better way to build the soil than forages combined with judicious, tightly managed grazing," instructs Richmond. "I have been dedicated to using a rotational intensive grazing system here."

Figure Set 23: Pasture (*left*) & the Rosebud River (*right*) at Regenera Ranch

Similar to HBTA, the cooperative's vision is for the land to be a hub for creativity, research, entrepreneurship, education, and community. There is a market garden, apiary, and native plant nursery all managed by different people; another community member will be making satellite imagery maps. In addition to sheep, the farm also cares for goats, horses, cows, and a handful of working dogs. Richmond characterizes it as "more than an operation producing a great amount of any one kind of product to achieve financial viability. Rather, this could be a home for a number of small-scale projects that would contribute in small but significant measure to the survival of the whole."

Developing such a multi-faceted, long-term project comes with its own challenges. In Rod's experience with various agricultural projects, he observes how there are lots of people with lots of passion, but with not a lot of time or financial stability. This can lead to difficulties delegating and managing responsibilities, communicating effectively, and maintaining momentum on time-sensitive projects. Along similar lines, Richmond laments, "you hear about these kinds of projects and they happen in part, but they might only get one part going. It can frequently slip away to whatever sort of model plays along with the larger farm economic system, which is for chemically produced commodity crops."

Another hurdle that Regenera has had to navigate is the distribution of their lamb. During a trial run with YYCGD, wherein the producers received $15/lb, they sold about 85% of their supply. However, no supply requests were made for future orders. One of Richmond's theories is that most meat products marketed through YYCGD were smaller, individually portioned cuts that were vacuum packed with labels. Although this is not as cost-effective for the consumer, larger cuts wrapped sustainably in brown paper do not sell as quickly. Even though producers don't make as much profit selling whole carcasses to a butcher, it can save time that can be directed elsewhere.

Despite the challenges for non-inheriting agricultural producers (e.g., high input costs, land access, storage facilities, equipment, transformation, market access, capital, and community ties), there are ways to get a foot in the door, build mutually beneficial relationships, and work cooperatively. In the following vignette, I use storytelling to describe two such doors that opened my eyes to the world of shearing, lambing, and the local agrarian network. Although I worked on a sheep farm in the Scottish Highlands in 2018, the two shearing experiences were vastly different. Taking an EXL approach to research instills how each farm truly has its own customs and needs that are co-determined by the weather, health of the crop, and coordination between farmers and their wider community.

Sheep Shearing and Lambing Vignette

It's a brisk morning in late March, 2021, as I speed walk to the warmth of Sara's car. "Buenos días, *mi Rosalinda*," she whispers while embracing me. We sit in silence for a moment, my eyes still puffy and red from the night before. This winter has been particularly challenging. When we talked on the phone last night, Sara insisted we go to Richmond's farm for shearing day. After 30 minutes, we pull into a long dirt road and see a group of people gathered around two mobile

shearers. A few people are inside the barn corralling ewes into a chute so that they line up one after another. One by one, the shearers gently maneuver an ewe from the chute to their station and deftly shear off their winter fleece. There is little struggle and any minor cuts are promptly sprayed with a disinfectant on their way out the barn door.

Figure Set 24: Shearing Sheep with Regenera Ranch (*left* & *right*)

Other helpers stand at the ready to sweep away debris, collect the fleece, and pass it up a ladder to the top of a tower (Figure Set 24). Richmond's grandsons sit at the top and stomp on the fleece to compact it into the burlap sack. Keeping count, they load 15-20 fleeces per sack. I observe for a while then jump in to assist with lifting up the fleeces. The smell and texture of lanolin are a comfort. This process continues for a few hours until all ewes and rams are shorn and grazing in a paddock with a few goats and half a dozen farm dogs. With the day's work complete, we put a kettle on for tea and warm up a pot of food. "I always bring Richmond lentils with Oscar's homemade bread," Sara smiles. Before driving back to the city, Richmond invites me to join the shearing festivities again next year at their new ranch. And so I do!

This time, I bring along my friend; we arrive at 9:00 in the morning and are quickly put to work arranging corrals and herding ewes. Since Richmond's grandsons aren't able to make it this year, I am nominated to climb atop the rickety tower and jump into the burlap sack. Soft,

greasy wool squishes between my toes. So many smiles and laughs are exchanged and new connections made. Richmond says he hopes we can return in a few weeks for lambing, which we eagerly agree to. We stay for a few days in Regenera's farm bungalow, taking on the early morning and late evening shifts. During the day we help with chores, giving fresh water and feed to all the livestock. We make sure there are enough pens set up to receive new pairs of ewes and lambs, and lay down fresh straw (Figure Set 25). There is also a litter of puppies and a handful of kids that we tend to. A snowstorm rolled in last night, so we watch for signs of frostbite or if any lambs were lost to the cold temperatures.

Figure Set 25: Tending the new lambs (*left*) & kids (*right*)

While most ewes birth singles or doubles, the occasional ewe has triplets. Although they typically produce enough milk to feed the number of lambs they birth, we monitor the smaller lambs and supplement their diet by bottle-feeding goat milk as needed. Richmond also teaches us

how to watch for lambs that have been rejected by their moms. It is rare, but if this is the case, we try to pair a rejected lamb with a different ewe who lost her second during childbirth. To do this, we rub her amniotic fluid on its body to smell like her and encourage her to lick it off like she would for her own baby. This seems to do the trick, but we maintain a watchful eye. We also look out for signs of mastitis–an inflammation of breast tissue that can signal infection–and prepare buckets of warm water with epsom salts to soak the utters. Every day, Richmond conducts lamb checks where he examines their eyes, ears, bellies, mouth temperatures, and docks the tails using a rubber ring. He also uses this technique to castrate male lambs. Ewes and their lambs spend the first few days together in individual pens to bond and be monitored more carefully. We then spray each pair with the same number on their backs and guide them into a communal paddock. The lambs frolick, jump, and stumble as they figure out their growing legs and feel the texture of snow for the first time. We laugh and are filled with adoration.

Each day brings forth a mix of emotions. With patience and a thick coat, I sit in the snowy pasture and wait for signs of active labour. I notice one ewe walking off by herself and pawing at the ground. *Excitement*. She makes a few circles before plopping down and throwing her neck back, lips unfurling with each contraction. Giving her space, I silently cheer her on as the amniotic sac makes its appearance, followed by a pair of front hooves and a nose. *Relief*. It's in the correct position; I won't have to go in with my hands to adjust it. *Nervousness*. Fifteen minutes go by and the sac still hasn't broken; the lamb is taking a while to fully come out. She stands up, walks around, and sits back down. I calmly but swiftly walk over, ready to pull the legs if needed. Just as I arrive, she gives one last push and out flops her lamb. *Confidence*. Right away, she turns to the lamb and licks off the sac so it can take its first breath. The lamb shakes its wet head, lets out a squeaky baa, and is nuzzled by a nickering mama. *Pride*. They did it! What

an accomplishment. The afterbirth oozes out and all appear to be healthy. I stay with the pair for a while and start noticing signs of a second delivery; she must have twins.

The contractions begin again and she oscillates between cleaning her newborn and throwing her neck back. *Anticipation*. This one takes even longer than the first and I'm unsure if I should intervene or let her go at her own pace. The second lamb is finally born but I hesitated for too long. Its body is deep yellow, indicating that it was in the birth canal longer than ideal. With my fingers, I break open the sac to allow air flow and tickle the inside of its nose with a few pieces of grass, as Richmond taught me. *Afraid*. At first this works; it slowly opens its eyes and tries to lift its head. *Panicked*. I run to get Richmond who comes to take a look, water and a towel in hand. We stand the lamb up and rub it with a towel. Keeping both lambs close to their mom, we walk them from the snowy pasture to a pen in the heated barn. I sit down inside the pen with the lamb on my lap, still holding onto hope, but then…it's gone. *Helpless*. Overwhelmed with guilt and grief, I hang my head and cry. Richmond and the others stand around us whispering words of comfort. So as to not unsettle the mom, Richmond takes the deceased lamb out of the barn and I walk to the pasture. His dogs follow behind and sit next to me as I cry what tears I have left. *Exhausted*.

I go to bed without dinner and take the latest morning shift at 7:00. The alarm sounds and I swing my heavy legs out of bed and into a pair of thick socks. Peeking out the window, I notice the snow has let up. Despite yesterday's events, it is time to make the final round of chores and check-ups before heading home. A quick slug of coffee, and I make my way to the barn. Fresh hay and water, *yes*. All utters in good health, *yes*. Lambs in their proper pens, *almost*. A curious escapee springs around, dodging my reach. *Here we go little fella, back with your mom*. I keep watch until he successfully latches for milk, then scan the barn for active labours. With none on

the immediate horizon, I trek to the main farmhouse. Over a steaming cup of *maté*, Richmond and my friend are deep in conversation. “Sheep people need one another. The network is very strong, and that’s what makes this possible. You don’t see it all at once; 99% of the time you work steadily on your own, but there’s the essential 1% where you do important things together. That makes the biggest difference as to whether you can keep your farm going or not.”

Richmond’s words elicit images of culling spent layers at HBTA, tagging yaks with Little Loaves Farm, and corralling turkeys onto trucks with Winter’s Turkeys Farm. Like shearing and lambing, these events can stir up emotions around life and death. No matter the task at hand, I feel better equipped to navigate such feelings when guided by such a supportive community.

Winter’s Turkeys Farm

In between Calgary’s city skyline and the Siksika First Nation Reserve lies a fourth generation farm, Winter’s Turkeys. Surrounded by cropland and cattle ranches, prairie grasslands and coulees, the Winter family has raised animals and grain on this land for over 65 years. The farm was first established by the great-grandfather of current farm operator Laurel Weigum, daughter of Corinne Dahm and Darrel Winter. In the early 1950s, Darrel’s father took over and farmed a section and a half with small equipment and intense passion. He grew and sold grain, beef, pork, eggs, turkey, and cream. “There was always something that worked, and there was always the fear that something wouldn’t,” shares Darrel. Before the days of quota, the Winter family had 1,000 laying hens that they would raise from chicks in a two-story building built by Darrel’s father. Despite potential disease risks, about 25-40 turkeys would also be brooded with the chicks for diversification. In 1958, however, the egg business was no longer viable. “We couldn’t sell enough eggs to generate enough income to buy feed for the chickens, let alone pay for the chicks

and all the work involved." So, the core chicken program was converted into turkey production and a new feed program was established.

Laurel, alongside her husband Lyle Weigum, still uses her grandfather's whole grain diet, which is not only efficient to prepare (not having to grind or roll it) but supports their natural metabolism. By busting the wheat down with their gizzards, the birds exercise their digestive system which makes them stronger and firmer. In addition to grit, their diet is supplemented with locally sourced organic greens, flax and organic soy meal, organic canola, minerals, and forage from their unlimited access outdoors. While commercially raised turkeys' lifespan is 10 weeks from birth to slaughter, the farm's free range, certified organic, and heirloom turkeys enjoy fresh air, sunshine, and clean bedding for 16-20 weeks before they are loaded onto trucks for slaughter (Figure Set 26). They are never given hormones, animal by-products, corn, or flavour enhancers, resulting in a naturally-basting, flavourful turkey weighing 17-22 lbs. for a hen and 24-30 lbs. for a tom. The entire Winter family takes great pride in how they care for their birds, as well as in the quality and consistency of their product.

Figure Set 26: Loading toms & hens with Winter's Turkeys Farm (*left* & *right*)

Darrel smiles at a memory and recounts,

> “Every year, I try to get to the grocery store to see our product on display. With most commercial birds, you can’t see through the packaging and don’t know the quality until you bring it home to cook. We make sure our packaging is clear and eye-appealing. So, I would go in and just observe people looking at the different options. Some folks would look at ours, shake their heads once they saw the price, and walk across to get a frozen bird. I could spot others 70 ft. away, marching step by step right to our bin to grab a turkey and take it home. Now that guy has had our turkey before! The other guy never has and likely won’t. Buyers typically love our turkey and say it’s the best they’ve ever had. But I can understand if people really like it but just can’t afford it, cus they’re not cheap. One time, Corinne was in the store doing the same thing I was. While standing at the bin, someone said to her, “you should try these turkeys! They are very, very good. I know this guy [Lyle] really well.” Corinne responds, “I know him too! He's my son-in-law.”” Darrel wipes away a few tears and Corinne smiles knowingly across the table.

Darrel’s brother succeeded their father for a few years before he and Corinne took over in 1977, just after they were married. “My mom and dad were Darrel’s father’s best customers, buying thirteen birds a year!” laughs Corinne. “My dad mostly grew grain, cattle, and did a bit of informal calf breeding. We also had some pigs, milk cows, and chickens for our family. I remember my mom and her best friend would get together to process the chickens; we kids would help and have fun.” Before Corinne and Darrel had children, they raised about a hundred cows. They would calve in March, seed in May, raise turkeys in June, harvest in September, and process turkeys in October and November.

> “When the kids came along, it was a lot harder. I remember I was feeding one year and it was so cold out. I said to myself “I don’t care how many cows we have to sell, we are going to get a feed system put in!” It just took too much time back then. We didn’t have much money, and it got too hard to maintain a diversified farm. So we eventually got rid of the cows and kept the kids,” Corinne chuckles. “But it was the turkeys that kept us in agriculture and gave us a good living. The kids could take piano lessons and we could eat good food. Now we keep a few sheep, bees, and a garden for homemaking.”

Laurel echoes the persistent trend in specialization that they see around them; more and more farms are being intensified, mono-streamed, and scaled-up despite the contestation of its efficiency (de Roest et al., 2018; Ricciardi et al., 2021). In the debate on farm size and

productivity, agroecologists argue that on average, smaller farms produce higher yields and have greater crop and non-cop biodiversity than do larger farms (Fortin et al., 2024; Ricciardi et al., 2021); and multiple cropping systems have superior crop yields over sole-crop farms of the same crop species (Deb & Dutta, 2022). A widely used indicator of yield advantage of multi-crop farms is land equivalent ratio (LER), which is defined by the FAO as "the ratio of the area under sole cropping to the area under intercropping needed to give equal amounts of yield at the same management level. It is the sum of the fractions of the intercropped yields divided by the sole-crop yields" (n.d.). The focus on land or labour productivity limits this debate, as argued by Nicholas Rada and Keith Fuglie (2019), whose use of total factor productivity (TFP) suggests that there is no single economically optimal agrarian structure. Rather, they argue that the relationship between farm size and productivity evolves with the stage of a country's economic development.

Regardless, Kees de Roest, Paolo Ferrari, and Karlheinz Knickel (2018) say it best, "many farmers try to balance a certain level of specialisation in order to achieve economies of scale and a reduction of production costs with farm diversification, harnessing the benefits of crop rotations, reducing risk and fostering the economies of scope" (p. 224). In their assessment of these differing agrarian development pathways, they find that diversified production systems are more resilient due to their adaptive capacity to absorb economic and environmental disturbances. For example, in early April 2022, the highly pathogenic avian influenza (HPAI) spread across Canada and the United States. This strain of H5N1 can severely affect both wild and domestic birds, including chickens, ducks, and turkeys. With nearly no immunity, 31 commercial or backyard poultry flocks in Alberta reported infections, leading to the deaths of approximately 950,000 birds (Environment and Protected Areas, 2022). Because HPAI is a

reportable disease to the Canadian Food Inspection Agency, producers were compensated for birds that were euthanized, but only during the span of raising them up to that date. There was little compensation for the loss of income.

The challenge most producers faced was getting back up and running. “There is so much lag between the diagnosis and your next paycheck,” explains Laurel. “The cycle is a bit shorter for chicken producers, so they have more of a chance to recuperate. Although industry is working to fill that gap, Avian Influenza is a global issue, so insurance agencies are reluctant to cover many costs.” Darrel adds that their way of farming is niche relative to commercial farming. This makes it a higher value product, but also harder to get insurance policies. More money is tied up in each bird than a commercial grower. “If we did lose a flock, we’d be out of business for that crop. Will the market still be there in fifteen months, or will they have gone elsewhere? We might be compensated for the commercial loss, but the business could still be hugely stressed coming up.” Similar to HBTA, Lyle reflects how HPAI also impacted their ability to participate in Alberta’s Open Farm Days or have customers visit the farm due to biosecurity hazards.

Winter’s Turkeys Farm faced the hardest economic slump in 2009 during the financial crisis of the Great Recession. Both their commercial and private accounts were hit, as customers had to decide between rent, car payments, and food. If times are tight, are people cutting out the high-end turkey, or is that the one thing they’re holding on to during the holidays? “With our history and our loyal customer base, we might persevere. Darrel and Corinne laid such a strong foundation,” says Lyle. Over the last few bites of Corinne’s homemade cinnamon buns, Laurel leaves us with a nourishing morsel. “We are selling tradition, nostalgia, and roots. People find

themselves wanting to do what their parents did because they want to continue carrying down those traditions for their growing families. Those roots will carry us into the future."

Growing for Meaningful Connections

Agriculture in Canada faces a complex landscape of challenges, many of which are deeply embedded in the broader economic, social, and environmental systems. Among the most significant themes reported by the rural producers in this chapter, as well as across the country, are high input costs, land access, storage facilities, transportation, market access, knowledge, capital, and the importance of cooperation and communalism. These issues are often interwoven and reflect larger systemic issues within capitalist economies.

High input costs have long been a critical issue for Canadian farmers, especially in the context of rising prices for seed, fertilizer, pesticide, and fuel (Lika & Mussel, 2023). The literature on agricultural economics highlights how the global capitalist market structure often leads to price volatility, exacerbating the financial strain on farmers (Akram-Lodhi, 2013; Bernstein, 2010). In particular, input costs are closely linked to the corporatization of agricultural supplies, where large agribusinesses exert significant control over prices. This places smaller-scale farmers–such as those at HBTA–at a disadvantage, as they lack the buying power to secure lower rates. The economic theory of "economies of scale" suggests that only those with large operations can remain competitive (Ikerd, 2023), further contributing to the marginalization of small family farms. Additionally, high input costs are tied to environmental sustainability concerns, as chemical inputs can degrade the land, increasing the long-term costs of farming (Brunelle et al., 2024).

Land access is another central issue that was expressed throughout my ethnographic fieldwork with rural producers, with many farmers citing the challenge of securing affordable

and fertile land. The increasing concentration of land ownership, driven by corporate agriculture and wealthy individuals, restricts access for new farmers, especially those from marginalized communities, newcomers, or Indigenous groups (Allen & Wilson, 2008; Qualman et al., 2022). The literature on land tenure underscores how land in capitalist economies becomes a commodity, often sidelining its ecological value (Beingessner, 2013; Kepkiewicz & Dale, 2019). For instance, urbanization and speculative investments in agricultural land further complicate access, making it difficult for farmers to maintain productive–while ecologically sustainable–operations or transition their businesses to younger generations (Desmarais et al., 2017; Jarosz, 2008). This issue intersects with historical injustices, particularly in Canada's colonial past, where Indigenous peoples were displaced from their traditional territories. Land access issues are also magnified by environmental concerns, as farmland is increasingly vulnerable to climate change, necessitating adaptive strategies that require both knowledge and investment.

Storage facilities and transportation are also concerns, particularly for perishable crops such as West Quarter Farms' haskap berries. Brent Mansfield and Wendy Mendes (2013) encourage municipalities to invest in building infrastructure that can support local food hubs with processing, food preparation, cold storage, and warehousing services. In their review of three Canadian AFIs, Sean Connelly et al. (2011) highlight Vancouver's New City Market, which envisioned a shared office space for local food organizations, as well as coordinated wholesale and retail food sales. Mary Beckie and colleagues (2012) speak to how many individual farmers markets in Canada rely on municipal governments for physical infrastructure and leasing contracts, but do not necessarily have title to the buildings or land. Compounding limited food hub infrastructure is the geographical vastness of Canada, where farmers in remote areas face higher costs to transport goods to market. In a capitalist system, the cost of infrastructure is often

borne by private entities rather than the State, which can result in underinvestment in rural areas (Jaffe et al., 2022). Similarly, market access remains a significant hurdle for Canadian farmers, who are often at the mercy of global market fluctuations. Large agribusinesses dominate export markets, and smaller farmers like Richmond Godfrey find themselves marginalized. Market access in a capitalist context is influenced by international trade agreements, which tend to favour multinational agrifood corporations over local producers (Holt Giménez & Shattuck, 2011). Canadian agriculture is increasingly integrated into the global capitalist economy, leading to overproduction in certain areas and undersupply in others, further exacerbating the inequalities faced by small farmers. Additionally, the increasing consolidation of grocery retail chains has reduced the bargaining power of individual farmers, who struggle to negotiate better prices for their products (McCorriston, 2021).

Capital is perhaps the most fundamental barrier to solving many of these challenges. Capital availability, whether through loans, grants, or private investment, is critical for accessing the necessary resources to sustain and expand farm operations. Small-scale farmers in Canada face difficulties in securing the capital required to invest in technology, renewable energy, and necessary infrastructure. The capitalist system often prioritizes profit over long-term sustainability, meaning that investment tends to flow into the most profitable ventures rather than those that promote resilience and ecological stewardship. Furthermore, tacit knowledge, or the technical know-how of how ecosystems function, is integral to sustainable agricultural practices. Farmers often have extensive knowledge passed down through generations, but there is also a need for formal education on topics such as climate resilience, soil health, and biodiversity. However, in a capitalist economy, access to this knowledge is often tied to the availability of resources, making it harder for smaller farmers to implement innovative techniques. Climate

change, for example, demands adaptive knowledge and practices that require investment in research and infrastructure, which is often beyond the capacity of individual farmers. Thus, the rural producers I collaborate with stress the importance of and need for more extension services and farmer-to-farmer networks.

Throughout my doctoral research with rural producers in Wild Rose Country, it became evident how cooperation and communalism are essential in counteracting some of the negative effects of capitalism on Canadian agriculture. Many farmers have turned to cooperative models, shared resources, and mutual aid networks to mitigate the financial and logistical challenges they face. These forms of collaboration can provide alternative ways to pool resources for purchasing inputs, accessing markets, or building infrastructure. Research in cooperative economics shows that these models can foster greater resilience, reduce costs, and increase market power for smaller producers (Sustainable Agriculture Network [SAN], 2023). However, these models often face challenges in scaling out and maintaining cohesion, especially when individual financial pressures are high.

Addressing the challenges associated with capitalist dynamics that prioritize profit over sustainability and social equity requires a multifaceted approach that incorporates not only technological and market solutions but also broader systemic changes that prioritize ecological sustainability, social inclusion, and community resilience. In what follows, I sow the seeds from each of my rural farming experiences into a relational soil of "meaningful connections." Through an analysis of the opportunities and barriers for regenerative agrarian alliances seeking food system transformation in Wild Rose Country, I explore growing for meaningful connections among fellow producers, among organizations and institutions, among consumers, and among the broader community.

Among Producers

In addition to mutually beneficial land-sharing opportunities, like West Quarter Farms' market garden at Happiness by the Acre and the native plant nursery at Regenera Ranch, the network of rural producers in Wild Rose Country support one another during laborious annual tasks. After a morning of gardening with immigrant growers at the Land of Dreams, Rod drives up to Regenera to lend Richmond a hand on sheep shearing day. On his way to visit friends in Siksika who keep sheep, Richmond stops at Winter's Turkeys Farm to load a trailer with old straw bedding. He drives this compost to Penny Red Gun's house on the Reserve who uses it for her household garden project. Michael, the UCalgary Garden Club, Lachlan and I have also contributed to Penny's garden by offering seeds, transplants, and labour. In the fall, Marcus, Lachlan, and Dani from Soil & Sage head northwest to Little Loaves Farm to help tag yearling yaks, who are managed with a Modified Adaptive Multi-Paddock Grazing system (Figure Set 27).

Figure Set 27: Tagging Yaks with Little Loaves Farm (*left* & *right*)

In previous summers, before the Mountain View Growers weekly farmers market, HBTA and West Quarter Farms could sell their eggs, produce, and berries through Michael's market table for RRUF. Before HBTA acquired their own stock trailer, they borrowed Lachlan's to transport their pigs and broilers to the abattoir. Richmond has lent Lachlan a set of discs to

surface till the HBTA garden plot, and Jerremie of Little Loaves Farm lent us a foot-powered thresher to harvest our rye cover crop. In Calgary, Rod welcomes Michael and other urban SPIN farmers to use his fan drying system and cold storage when needed. These are just a handful of examples.

Kolby has also been engaged in cooperative marketing and purchasing with her surrounding farmers. They have collectively bought infrastructure such as a cattle squeeze and saw mill, and often trade equipment, including trailers, discs, and a larger tractor. “We have some pretty big dreams with the neighbours,” Kolby says. “They want to have a little butcher shop on their farm, but have so few animals. So, we will help buy the infrastructure and acquire an on-farm slaughter certification together.” When small producers are in close proximity to one another, it makes sense to share the burden of large projects and the cost of heavy machinery. “Instead of both people taking a piece of the same pie, they could be willing to bake a new pie together; to have a diversity of pies. I find this mentality to be more prevalent among the new generation of farmers. It’s not that there isn’t any competitiveness, but the mentality that a collaborative effort can boost all parties is more pervasive.”

At the heart of meaningful connections are interactions over a sustained period of time. For Richmond to be able to coordinate the thousands of sheep required for clear-cut grazing in B.C., he needed to have pre-established connections with sheep producers all over Alberta; particularly, among Hutterite communities, which would send 200-300 sheep per colony. “You had to have a real appreciation for the alternative that they represent or they wouldn’t trust and support you. To have mutual understanding and respect. That broader element of community participation is what has made my success in agriculture possible. They still come by to visit, bring food, and check in on me here at Regenera.” Similarly, members of Siksika Nation and a

nearby Hutterite colony help Winter's Turkeys Farm with loading birds on transport trucks (this is how I first met the Red Gun family).

Meaningful connections can be grown among producers of differing economic, ethnic, educational, or religious backgrounds, and across urban and rural communities. Nevertheless, it is important to recognize the distinctions within the farming community. Lyle speaks to this,

> "I went to a dinner a few weeks ago with other chicken and turkey producers. There's something really encouraging sitting with other people who really understand what you do and have the same difficulties. As a poultry farmer, when I sit at a table with grain farmers or a cattle guy, what we are doing is so different that it can be hard to find common ground. Sure, the rancher and I could both complain about feed prices, but he is buying barley and I'm buying wheat and soy. He's talking about silage costs and I don't know anything about that. Even within the poultry community, what we are doing is so different from other commercial growers. The ins and outs of a conventional grain farm may be dissimilar to an organic grain farm."

While recognizing the heterogeneity of farming practices and producers, there is power in collective organization, from the local grassroots to national and international institutions.

Among Organizations and Institutions

American cultural anthropologist Margaret Mead once said, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has" (Keys, 1982). Not discounting the abundant knowledge any one producer has, it can be challenging, if not impossible, for an individual alone to effect structural change. Strategic social organization is key to advocate for rights, protest against systems that oppress those rights, and implement creative ways around that oppression. As discussed in previous chapters, there are a number of organizations and institutions working to support small-scale growers in Wild Rose Country. Organic Alberta, Young Agrarians, Slow Food, and Regeneration Canada–to name a

few–all form a strong foundation for ensuring sustainable producers' voices and needs are heard in policies backed by the NFU, FSC, and The Canadian Food Policy Advisory Council.

Since 2018, Laurel has served as the chair of Alberta Turkey Producers, an organization representing and advocating for provincial turkey producers within federal regulations. She says that it has been a rewarding experience that has opened the opportunity to meet and collaborate with fellow farmers. She also enjoys the opportunity to encourage more Albertans and Canadians to eat turkey, especially Winter's turkeys. "This past year in particular [with avian influenza] was challenging. But it would've been harder without a fellow turkey producer to text or call." Lyle also says that Laurel's participation on the board has had a spillover effect in his life, where he now feels more comfortable reaching out to fellow producers with a question or problem. Especially because there are not many poultry producers near their farm in Dalemead. "Even though I'm not on the board, there has been a benefit to our farm with more access to people who have such a wealth of information. We may come together with other producers to build information, and then come back to our farms and individually enact what we learned."

Formal organization among small-scale growers facilitates a network for expanding interpersonal relationships, exchanging knowledge and resources, and fostering a shared sense of identity rooted to the land. Growing for meaningful connections among institutions also enables individual producers to function more effectively, as their voices, priorities, and challenges are able to reach broader society.

Among Consumers

One of the main pathways for producers to grow meaningful connections among broader society is through their consumer base. According to the Canadian Census of Agriculture (Statistics Canada, 2022a), both the number and proportion of farms reporting direct sales have risen by

almost 1% since 2015, totalling 13.6% of farms in Canada. This increase includes both unprocessed (i.e, vegetables, eggs, and poultry) and value-added products (i.e, jams, cheeses, and sausages) sold via deliveries to consumers (from online farm stores), on-farm stands, farmers markets, and CSA pick-up hubs. Indirect distribution streams are also relied upon for moving wholesale products to grocers, warehouses, restaurants, and value-added makers. For Winter's Turkeys, their biggest accounts are grocery stores and meat markets, but they have a strong, loyal customer base that wants to get their turkeys straight from them or from the small, local meat shops they supply.

"There's an advantage to us opening our farm because we are selling directly to consumers. They like coming and seeing where their food comes from," explains Lyle. Corinne jumps in, "for the most part, people schedule the trip into their day. The people that come out are just so excellent and want to be here! Coming to the farm is also a bit of education for them that they can take home and have a better understanding of what we're trying to do or recommend to their friends and family to support local agriculture." Without missing a beat, Laurel joins, "people come and say "my parents bought turkey from Winters! We have been coming to the farm for 20 years" or they ask, "is Darrel in the house? I'm going to go in and say hi!" We also get lots of calls about where they can find our product or how they can support us. Supporting our retailers also supports us. If coming to our farm is the experience you want, that's good as well." Since it is not always convenient or economical to drive to the farm, it is important that consumers have multiple options for acquiring the quality product. Customers can pick up turkey from their warehouse in Calgary, from grocery stores and markets such as Calgary Co-op and Sunnyside Natural Market, or order a home delivery for an additional cost. Some people opt to purchase two turkeys when they drive to the farm in October to save a trip in December.

Although direct sales have the highest profit margins, as there are fewer intermediary expenses, they can be time-consuming to coordinate, less dependable when the economy falls, and impractical on a large scale. During the pandemic, some farms had to pivot to direct deliveries to adapt to quarantine mandates. As the cost of fuel rises and falls, a farmer may just break even on sales that are delivered straight to consumers. Entire days can be spent driving from door to door, as was the case for the Riedners prior to their egg collection boxes. Similarly, producers like Michael, Dani, and the Clydes who work a four-hour market stall may earn just enough to cover the cost of the booth and their hours. Opening an on-farm stand may require a lot of one's time, and on-farm pick-ups can pose a higher biosecurity risk, as was observed during the 2020 avian influenza outbreak.

> "Of the turkey producers I know who sell wholesale, speaking broadly across Alberta and Canada, everyone's trying to do their best job. It's not that they have anything to hide by not showing people their barns, there's just no advantage," says Lyle. "It's only a risk, even a small one that could explode. For us, our birds are outside all the time, so we accept a higher level of risk. We are also a forward-facing business to our customers, saying "if you like what we're doing here, support us." Whereas if I'm a commercial grower and invite someone to my farm and say "if you like what we're doing here, you can go to your grocery store and purchase turkey that will help the industry, but I can't guarantee that it's mine. It's just turkey." For many years, and hopefully again in the future, we will accept the risk of someone coming onto our farm because we know that it's a part of how we make sales and how we build a customer base."

Inspection and transportation regulations may also contribute to the relatively low percentage of direct sales and direct deliveries. If more farmers were able to sell uninspected cuts to consumers, with the appropriate means of documentation for tracing and accountability, would we see more direct-to-customer sales? Despite the challenges producers face when it comes to moving their product, growing meaningful connections among consumers and the broader community is integral to a small-scale farm's viability.

Among the Broader Community

All citizens impact and are impacted by the global food system. Every time we walk into a market or restaurant, we are taking part in the cyclical process of food production, distribution and aggregation, processing, marketing, purchasing, preparation and consumption, and waste management. Even if someone does not grow food, participate in agricultural organizations, or purchase food from local growers, they still have the voting power to determine which policies and priorities will be put forth in governance. Growing meaningful connections among the broader community can deepen an increasingly urban society's understanding of the constraints of weather and the importance of seasons. It can foster intercultural understanding and open pathways for collaboration across sectors and spaces.

For Richmond, the way that community has been woven into his agricultural career is through his flock of sheep. People have lent him pasture to help build his system, and have exchanged favours organically. "It takes somebody who has been in the community longer and knows more about what goes on in the general public to put together the kind of formula for landless, knowledge-based operations proposed by Joel Salatin." He says that relying on individuals to provide pasture is very irregular and hard to predict. "I was lucky that I entered the community [around Regenera Ranch] sideways. I rented pasture a few miles north of here, so I knew a variety of people. I'd been buying inputs from nearby farms and had gotten to know the wool buyers at Custom Woolen Mills." Building relationships in the community can also lead to a better understanding of different animals' functions and capabilities. During Richmond's first year at Regenera, the neighbour that cut his hay asked if the sheep could come chew down the overgrown buckbrush and wolf willow on his property across the highway. "That's what sheep do, isn't it?" Richmond had to explain how sheep are not particularly good at reducing the two

types of brush he has; goats would be better browsers. As well, it would be a time-consuming trek to and from the property on top of Richmond's already full plate. Fortunately, Richmond has built numerous relationships over the years to help with farmwork, including people from Siksika, Chile, and Mexico.

Gift-giving is another practice of maintaining meaningful connections. In addition to foundational works by social theorists, such as Marcel Mauss' 1925 essay, *Essai sur le don: forme et raison de l'échange dans les sociétés archaïques* (*The Gift: Forms and Functions of Exchange in Archaic Societies*), Indigenous scholars have written extensively on the role of reciprocity in nurturing relationships of accountability (Kimmerer, 2013, 2024; Tuhiwai Smith, 2021; Wilson, 2008). Seeds and surplus transplants are often gifted from one grower to another, as are portions from a garden's bounty come harvest. Anyone who visits Richmond is sent home with a bag full of produce and bread gifted to him by Hutterite friends. When Lachlan and I visited the Winter family, we brought jars of honey from his apiary and were sent home with a box full of turkey meat. Any time Landon visits Sara and Oscar, he brings boxes of organic fruit and vegetables from Discovery Organics, which are then redistributed as gifts to their visitors.

Gift-giving extends beyond human interactions to our care for all living beings. One concept that emphasizes the interconnectedness of humans and nature is 'kincentric ecology.' Dennis Rogers Martinez (2018), Chair of the Indigenous Peoples' Restoration Network[72], describes kincentric ecology as a perspective where humans see themselves as part of an extended ecological family, sharing relationships with all elements of the ecosystem. Martinez argues that Indigenous peoples have long practiced this form of ecological management, which is essential for sustainable living. This approach contrasts with biocentric models by focusing on the equality and co-management between humans, animals, and plants (Nelson, 2008). All parts

[72] This is a working group of the Society for Ecological Restoration International, https://www.ser.org/.

of the ecosystem, including living and inanimate elements, are interdependent through a kinship network that relies on reciprocity and deep respect (Salmón, 2000). Rarámuri (Tarahumara) anthropologist and leading expert in ethnobotany, Enrique Salmón (2000), emphasizes how humans must give back to nature and care for it, just as nature provides for humans. This respect fosters a sense of stewardship, where humans are responsible for maintaining the balance of the ecosystem for generations to come.

Figure Set 28: Gifting feathers from drakes (*left*) & wool from sheep (*right*)

Drawing upon the principles of kincentric ecology, relational foodways consider the physical, spiritual, and cultural dimensions of the relationship between humans and the environment. After culling drakes or spent layers at HBTA, the feathers are left on the ground for birds to add to their nests. On sheep shearing day at Regenera Ranch, scraps of wool are left for voles and brought to Michael and Sara's urban gardens for bumble bee boxes (Figure Set 28).

While fleshing and tanning one of Jerremie's yak hides, Lachlan is joined by magpies and ravens who clean up the bits of meat that are scraped off.

In addition to growing crops and animals for meaningful connections among producers, organizations, consumers, and the wider community, small-scale farmers also grow for self- and -communal sufficiency. They often tend a home garden from which they preserve berries, roots, produce, and legumes for the winter months and seeds for the following spring. Medicine gardens provide an abundance of natural remedies for wounds, stings, aches, and stress. Fibre can be turned into yarn for clothing, and hides can become warm coats, blankets, and rugs. Maryann from Good Note Community Farm grew multicoloured stands of willow to weave into baskets for storage and transport. Each fall, Lachlan and I render tallow from his dad's steer harvest to make into candles and soap. If HBTA has a surplus of eggs, Sarah bakes quiches to freeze for quick dinners after choring. And Richmond delights in the milk produced by his personal dairy cow. Growing for self- and communal-sufficiency reduces the dependency on, and cost of, commercial products manufactured in potentially unsustainable ways. It also diversifies one's skill-set, which can support self-determination, dignity, and increased confidence.

Over the course of four years, I was grateful to work hand-in-hand with rural producers in Wild Rose Country. In Part III, I harvest the yields from growing for social agencies with a not-for-profit farm, growing for the alternative food network with an urban farm, growing for the Commons with an activist collective, and growing for meaningful connections with rural producers in Wild Rose Country. Guided by an analytical framework of relational foodways, the following chapters discuss my findings on the pathways, pitfalls, and politics of regenerative farming in an agro-industrial complex. In Chapter 8, I present the findings that emerged from my EXL methodologies and address the political, socio-economic, gendered, ecological, and

cultural-spiritual factors impacting farmers' ability to employ regenerative practices. In Chapter 9, I reflect on and discuss the significance of my findings within the broader fields of Critical Agrarian Studies, Socio-Cultural Anthropology, and Development Studies before "putting the farm to bed."

PART III

HARVESTING THE YIELDS

Chapter 8: Findings

This chapter presents the key findings of my research, offering an in-depth exploration of the pathways and pitfalls for implementing regenerative farming practices within an agro-industrial framework. By addressing my research objectives and questions, I illuminate the ways in which relational foodways contribute to fostering sustainable and resilient food systems. I unpack insights gained through experiential farming and farm exchanges, which reveal themes such as the development of a network of food resilience, seed saving practices, and increased ethnoecological awareness. Complementary findings emerged from group sharing circles and storytelling sessions, highlighting the processes of decommodification, degrowth, intercultural understanding, and the strengthening of intergenerational relationships. Drawing on my four methodologies, this chapter weaves together a "knowledge basket of relational foodways." These methods provide a nuanced perspective on how ethnoecological communities in Wild Rose Country are being cultivated and supported through regenerative farming efforts. The subsequent sections delve into these findings, offering a window into the transformative potential of regenerative agriculture to nurture community, heritage, and sustainability in the face of industrial agricultural pressures.

Pathways, Pitfalls & Politics for Food System Transformation

In the quest to transform food systems toward greater equity, sustainability, and resilience, this chapter presents the findings of my collaborative research by weaving a basket of knowledge crafted from the strands of political, socio-economic, gendered, ecological, and cultural-spiritual relations that shape and define the possibilities for food system transformation. Guided by an analytical framework of relational foodways, these weavings form the material culture for meaningful change.

Food system transformation necessitates political will and collaborative networks. My findings highlight how grassroots initiatives and policy-level interventions converge to build resilient food networks, particularly through seed-saving practices. These practices emerge as powerful acts of resistance against corporate monopolies over agricultural resources, fostering agency and community solidarity. Yet, the politics of ownership and access present challenges, underscoring the delicate balance of power in these initiatives. The socio-economic dimensions of food systems reveal stark inequalities in the distribution of resources and benefits. My work uncovers the pervasive impacts of labour divisions, with marginalized groups often bearing the brunt of exploitation. At the same time, models of degrowth and decommodification offer promising pathways to reimagining food systems that prioritize community well-being over profit, though these approaches face resistance within market-driven economies.

Gender dynamics are deeply embedded within food systems, influencing access to resources, decision-making power, and labour roles. My findings draw attention to the vital yet undervalued contributions of women and gender-diverse individuals in food production and preservation. Addressing these disparities requires a commitment to equity and the dismantling of systemic barriers that perpetuate gendered inequalities. Knowledge transfer across generations also emerges as a cornerstone of food system resilience. Through the preservation of "traditional" practices and the integration of innovative methods, intergenerational collaboration enriches food systems and ensures their sustainability. However, my findings also expose tensions between generations, driven by shifting priorities and external pressures.

This chapter also highlights the interplay between human communities and their ecological contexts, which is critical to food system transformation. Ethnoecological awareness—the understanding and application of ecological knowledge—proves instrumental in

fostering practices that are both sustainable and culturally rooted. Yet, ecological degradation and climate change pose significant threats to these systems, complicating efforts toward long-term sustainability. Finally, cultural and spiritual dimensions of food systems underscore the profound connections between food, identity, and community. My findings reveal that fostering intercultural understanding can bridge divides and enhance collective efforts to transform food systems. Nevertheless, these connections are often undermined by cultural erasure and homogenization, necessitating deliberate efforts to celebrate diversity. Together, the findings of my collaborative doctoral research illuminate the complex realities of food system transformation in Wild Rose Country. By acknowledging and addressing the pathways, pitfalls, and politics inherent in these relationships, we can envision and enact more just and sustainable food systems.

Political Relations

The transformation of food systems is inherently political, shaped by governance structures, power dynamics, and policy influences that dictate access to resources and decision-making processes. Herein, I explore these dimensions through key themes—the concept of ownership, democratic governance, and seed sovereignty. The question of ownership—"Who owns what?" (Bernstein, 2010)—reveals entrenched inequalities in access and control over productive inputs such as land, water, machinery, and credit. Many farmers, particularly small-scale and women growers, face insufficient access to these inputs and markets, exacerbated by environmental uncertainties and socio-political constraints. Economic pressures, such as high land prices and limited financial support, disproportionately affect new entrants and marginalized groups. Social and political dynamics, including gender inequality and policy exclusion, further complicate resource access. Farmers employ diverse strategies to overcome these challenges, including

cooperative ownership models, collective purchasing agreements, and informal seed-sharing networks. Relational foodways emphasize collaborative approaches that address both economic and social inequities.

Access to essential resources like land and water remains a cornerstone of food system transformation. My case studies illustrate varied land ownership dynamics, from sole proprietorship to cooperative arrangements. Families such as the Winters and Clydes demonstrate the benefits of individual land ownership, including autonomy and control over production decisions. Examples such as Regenera Ranch and Highfield Regenerative Farm illustrate how co-ownership and formal lease agreements facilitate resource-sharing while enabling access to urban and peri-urban agricultural spaces. The urban plot on 17th Avenue, urban apartment rooftops, and West Quarter Farms' market garden at HBTA show the role of informal leases in providing affordable land access for small-scale producers. Despite these diverse arrangements, challenges persist, particularly in securing long-term land tenure, affordable access to water, and financial support for infrastructure development. Landon Grams, a first generation young farmer, observes:

> "Farming in Alberta is vastly industrial, with feedlots and monocropped fields monopolized by large corporations. Small farmers face many challenges, from setting up the necessary infrastructure to rebuilding soil in a field that has been damaged by years of conventional tillage. It is hard for small farmers to compete in today's market and make any money, especially with livestock and lowball auction bids. Small farmers also face barriers for acquiring crop insurance. When I apprenticed at a regenerative farm through the Young Agrarians, our crops not only suffered from low precipitation but a severe hailstorm that swept through. Fortunately, the farm has a loyal customer base and network of other producers who got them through it."

Throughout my fieldwork, I observed varied patterns of ownership and access among agricultural equipment, inputs, and seeds. While most producers purchase and maintain sole ownership of agricultural implements such as broadforks, tractors, and irrigation lines for the

sake of convenience and immediate accessibility, other arrangements are also prevalent. Many farmers share or lease equipment, some engage in cooperative purchases, and a few receive donated materials or fabricate their tools independently. These diverse ownership models often reflect the economic realities and social networks within which farmers operate. When it comes to seeds, farmers who save seeds from their harvest ensure they have enough for subsequent planting and banking, often distributing surplus seeds freely among fellow growers, friends, family, neighbours, and local seed banks. This practice underscores the relational and community-oriented nature of seed-sharing traditions in agriculture.

Insights from my case studies reveal that access and control over these productive inputs are uneven and depend on multiple intersecting factors, including economic resources, social connections, and institutional support. While many farmers strive to maintain control over essential inputs like machinery, seeds, and land, challenges persist. As previously discussed, access to credit, finance capital, and research and development support often remains limited, particularly for small-scale and marginalized producers. Moreover, barriers to secure land tenure are significant, with economic inequities, political structures, and social norms shaping who has control over this critical "resource." Environmental constraints, such as climate variability and resource degradation, further complicate access and control dynamics, disproportionately affecting economically and socially vulnerable groups. Strategies to improve access and control vary widely. Cooperative arrangements, such as shared ownership of expensive machinery or collective seed banking initiatives, demonstrate the potential for resource pooling to mitigate individual costs. Farmers also pursue advocacy efforts to address systemic barriers, including lobbying for equitable land policies or increased public investment in agricultural research and infrastructure. Some producers experiment with agroecological practices to enhance resilience

and self-/communal-sufficiency, such as saving and exchanging heirloom seeds or transitioning to regenerative farming techniques.

From a feminist political ecology (FPE) perspective, these access and control relations often reveal gendered inequalities. Women, for instance, have historically faced greater challenges in securing land ownership, credit, and access to agricultural technology due to entrenched social norms and discriminatory policies. Gendered labour divisions also mean that women's contributions to seed saving, soil management, and local food systems are undervalued or rendered invisible in formal agricultural policies. Agro-food and environmental policies can unintentionally perpetuate these inequalities by prioritizing industrial-scale agriculture over smallholder systems, where women are more likely to be involved. Relational foodways offer an alternative framework to address these disparities. By emphasizing collective practices, interdependence, and sustainability, relational foodways challenge dominant paradigms and create spaces for greater gender equity. For instance, community-based seed banks and participatory decision-making processes can empower women and gender-diverse people to assert greater control over productive resources. Transforming these systems requires deliberate policy shifts, including gender-sensitive land reforms, equitable financing mechanisms, and inclusive agricultural research agendas that amplify community agency in democratic governance. Only by addressing these structural inequalities can we achieve a more just and sustainable agro-food system.

When analyzing the political relations of food systems, particularly the concentration of productive inputs and supply chain mechanisms (i.e., processing and distribution), it is also essential to ask:"Who does what?" (Bernstein, 2010). As detailed in my introductory chapter, this research highlights a growing concentration of supply chain power among large

corporations, limiting opportunities for small-scale producers in Canada. Farmers engaged in relational foodways attempt to reclaim agency through direct-to-consumer sales models that bypass intermediaries; CSA initiatives that build local supply chains; and partnerships with local food distributors to ensure fair pricing and access to broader markets. However, these efforts are constrained by structural barriers, including monopolized processing facilities and restrictive marketing regulations. Policies that decentralize supply chains and support small-scale processing infrastructure can help counteract these challenges.

While all my case studies contribute insights into the broader political landscape of regenerative farming in Wild Rose Country, the specific dynamics of ownership, access, and political agency differ based on their organizational structures, objectives, and socio-economic contexts (Table 10). Peri-urban farms underscore the role of partnerships and external support in sustaining regenerative practices. Urban farm businesses highlight the necessity of aligning economic viability with ecological goals in competitive capitalist systems. Activist Collectives illustrate the transformative potential of Commons-based approaches but also expose the challenges of sustaining grassroots momentum. Rural producer networks demonstrate the enduring relevance of traditional practices while grappling with structural barriers in modern agricultural systems. To varying degrees, they all employ daily acts of resistance against corporate monopolies. Ultimately, these diverse perspectives underscore that food system transformation requires not only technical innovation but also profound shifts in political will, collaborative networks, and equitable policy frameworks. Across all field sites, challenges of ownership and access to resources reveal a persistent imbalance of power, with systemic inequities shaping the possibilities for transformative change.

	Political Relations
Not-for-Profit Peri-Urban Farm	• relies on grants, donations, and volunteer labour, fostering a collaborative ethos but also creating dependencies on external support and funders' priorities • lasagna beds and upcycling are framed as acts of ecological stewardship that align with broader community goals • advocates for municipal land-use changes, Microhomes, and food security for vulnerable populations
Urban Farm Business	• operates within the constraints of urban economies and market-driven pressures • negotiates with city councils and private homeowners to access limited urban land • regenerative practices and SPIN model are framed as both ecological and economic strategies, but their political dimensions—such as resisting urban land gentrification or advocating for policy support—are secondary to immediate business viability
Activist Collective for the Commons	• deeply rooted in grassroots resistance against corporate control, neoliberalism, and State-imposed policies • seed-saving, cross-property growing, and animal husbandry are acts of political defiance and community empowerment • collectivism fosters horizontal decision-making and challenges hierarchical ownership models • can face difficulties with internal politics, organizational momentum, and external opposition from entrenched power structures resistant to Commons-based approaches
Rural Producer Networks	• navigate fluctuating markets, State policies, and environmental pressures • seed-saving practices serve as mechanisms for preserving biodiversity and asserting local control over agricultural inputs • face power imbalances when engaging with larger supply chains or negotiating with policymakers • the role of collective organization is crucial in amplifying their political voice, yet the geographic dispersion of members can make coordinated action more difficult

Table 10: Political Relations Across Field Sites

When unpacking the concepts of ownership and productive resources, Indigenous epistemologies offer a transformative, relational approach to food and farming systems politics. In *Blackfoot Ways of Knowing: The Worldview of the Siksikaitsitapi* (2004), the late Dr. Betty Bastien, of Piikani First Nation, emphasizes communal stewardship, interconnectedness, and reciprocal relationships with the land rather than individual possession. For the Blackfoot[73] people, land is not a commodity to be owned but a sacred, living entity imbued with spiritual significance. It is a source of life and is treated with deep respect and gratitude. Colonial systems

[73] For more resources on Blackfoot relationships with the land, see https://www.glenbow.org/blackfoot/teacher_toolkit/pdf/Land_Resources.pdf

imposed concepts like private property, land treaties, and reserve boundaries, disrupting Blackfoot relationships with the land. However, Blackfoot communities continue to resist and challenge these systems, advocating for land rights, traditional use, and the recognition of their worldview in contemporary governance.

While Indigenous Ways of Knowing continue to be marginalized in modern policy and practice throughout Canada, there is a growing movement to support and integrate place-specific ecological knowledges. For instance, collaborations between urban growers and Indigenous-led social enterprises, such as FoodScape Calgary, emphasize land stewardship, native perennial landscaping, and the preservation of heirloom seeds. Practices like no-till farming and intercropping, informed by Indigenous farming systems, demonstrate ecological benefits and cultural significance. Nonetheless, mainstream agricultural policies often fail to prioritize Indigenous-led initiatives, perpetuating colonial structures of control. To ensure meaningful integration, policies must actively prioritize Indigenous leadership and provide resources for ecological restoration and cultural preservation. This includes advocating for legal protections of Indigenous- and farmer-saved seeds, and investing in local seed networks that can counteract corporate concentration while reinforcing ecological sustainability.

A Network of Food Resilience and Seed Saving

Building a resilient food network requires intentional collaboration and a deep respect for traditional practices that sustain ecological and cultural integrity. Over four growing seasons, collaborative efforts between community members and regenerative agriculture practitioners have increased the resilience of local food and seed systems, particularly during unprecedented times such as a pandemic. Initiatives like Grow Calgary, RRUF, GFL, and HBTA exemplify how

localized, cooperative approaches can increase the availability and accessibility of nutritious food, strengthen seed sovereignty, and nurture ecological stewardship.

Efforts at Grow Calgary introduced no-till lasagna beds layered with nutrient-dense organic materials, yielding a variety of herbs and produce. Similarly, RRUF's passive solar greenhouse supported the growth of diverse polycultures, native flowers, and heat-loving plants. The Activist Collective in GFL demonstrated the power of small-scale farming, cultivating backyard plots for root crops, medicinal herbs, and leafy greens, while integrating practices such as low-till methods and poultry keeping. In rural contexts, HBTA showcased a symbiotic relationship between animal husbandry and vegetable production, grazing livestock alongside cultivating crops on land managed by families and collectives. These diverse models illustrate how collaboration, shared knowledge, and adaptive farming techniques contribute to food resilience. One unifying thread that emerged across these initiatives was seed saving. At West Quarter Farms, an annual seed collection and propagation effort ensured the continuity of heirloom vegetable, grain, flowering and medicinal plant varieties (Figure Set 29). This process also involved sharing seeds within kinship networks, extending their impact. By practicing seed sovereignty—rooted in the right to save, exchange, and breed seeds—farmers challenged corporate monopolies and the commodification of genetic resources.

Figure Set 29: Flowering plants in the market garden at HBTA (*left* & *right*)

Seed sovereignty, as a concept, is closely tied to the global food sovereignty movement articulated by La Vía Campesina. This framework rejects corporate control and intellectual property regimes that restrict access to seeds, advocating instead for the protection of seeds as cultural and ecological Commons. Scholars such as Vandana Shiva (2016) and Jack Kloppenburg (2005) emphasize that seeds are more than biological entities; they carry historical, cultural, and ecological legacies. Research emphasizes the importance of farmers, especially women, in conserving seed diversity and maintaining agroecological systems (Howard, 2003). In many cultures, women manage household gardens, conserve seed varieties, and pass down agricultural knowledge through generations. For instance, women's involvement in the Indian-based grassroots movement, Navdanya, calls for an unhindered circulation of seeds that enhances

biodiversity while promoting gender equity (Shiva et al., 2012). At the 2007 Women Seed Forum in South Korea, female peasants emphasized their central role in conserving, exchanging, and growing native seeds in the face of neoliberal globalism (LVC, 2007).

The *Journal of Peasant Studies* (Volume 47, Issue 4) features multiple case studies that reveal insights into movements for seed activism. From the Alliance for Food Sovereignty in Africa's Seed Working Group to a Latin American Seeds Collective, South Asian GM-Free coalitions to North America's Seed Savers Exchange, a robust network of Indigenous farmers, activists, and organizations are advocating against seed policies that undermine peasant seed systems and sovereignty (Peschard & Randeria, 2020). One key finding of the JPS Special Forum is the tension between agroecological practices and the legal frameworks imposed by global trade agreements, which favour concentrated corporate seed systems over community rights. While resisting the encroachment of genetically modified organisms (GMOs) through the creation of seed cooperatives, farmers contend with new genome editing technologies, biopiracy, and even the criminalization of informal seed exchanges.

In Canada, seed sovereignty faces unique challenges stemming from the dominance of industrial agriculture, regulatory barriers, and the privatization of seed systems. The introduction of GMOs and the rise of corporate seed monopolies threaten biodiversity and undermine traditional farming practices. Small-scale farmers often struggle to compete with industrial seed suppliers, and Indigenous communities face the erosion of their seed heritage due to land dispossession and environmental degradation. Women play a growing role in addressing these challenges in Canada. Across the Prairie provinces, women farmers and seed savers are actively engaging in regenerative farming practices that prioritize biodiversity, soil health, and community resilience. Initiatives such as SeedChange and Sovereign Seeds[74]–a

[74] https://weseedchange.org/; https://www.sovereignseeds.org/

decolonially-driven, Indigenous-led seed sovereignty network–highlight efforts to reclaim seed sovereignty and restore ethnoecological knowledge.

My research on relational foodways and regenerative farming in Alberta aligns with global seed-saving debates. Through experiential farming and farm exchanges, I observed how farmers in Wild Rose Country weave networks of resilience by preserving heirloom seeds and promoting intergenerational and intercultural knowledge-sharing. These practices not only sustain biodiversity but also cultivate community cohesion and cultural heritage. For example, group sharing circles revealed that seed-saving practices often transcend agricultural objectives into health and healing among all living beings, fostering a sense of belonging and stewardship. Farmers emphasized the importance of decommodification and the politicization of seeds as Commons, echoing global calls for resistance against corporate control. Storytelling further highlighted how seeds are framed as symbols of life, renewal, and cultural identity.

Despite the challenges, opportunities exist to strengthen seed sovereignty in Canada. Policy reforms that recognize farmers' rights to save and exchange seeds could create a more equitable agricultural system. Expanding support for community seed banks and cooperative seed-saving networks can empower small-scale farmers to preserve biodiversity. Educational programs and storytelling initiatives can further raise awareness of the cultural and ecological significance of seeds, building bridges between Indigenous and settler communities. Seed sovereignty cannot be achieved without recognizing the central role of women as seed guardians. From India to Canada, women's contributions to seed saving and biodiversity conservation underscore the importance of integrating traditional knowledge with contemporary agroecological practices. In Alberta, relational foodways and regenerative farming practices offer a lens to reimagine agricultural systems that prioritize community resilience and ecological

sustainability. By addressing the challenges of corporate control, intellectual property rights, and environmental degradation, Canada has the opportunity to advance seed sovereignty as a foundation for a more just and sustainable food system.

The transformation of food systems requires addressing the political dimensions of governance, resource access, and ownership. Insights from relational foodways underscore the importance of integrating Indigenous knowledges, promoting democratic governance, and securing seed sovereignty. By centering equity and sustainability, these initiatives provide a pathway for reimagining food systems that honour the interconnectedness of people, land, and resources or Nature's gifts. However, systemic barriers, including gender inequalities and supply chain concentration, necessitate coordinated policy interventions and community-driven advocacy to achieve meaningful change.

Socio-economic Relations

Relational foodways in Wild Rose Country operate within a complex socio-economic landscape that includes diverse economic models, cooperative practices, local circular economies, and innovations that transcend conventional agriculture. These approaches highlight both the opportunities and barriers faced by regenerative farmers striving for economic viability while contributing to social transformation. My findings indicate that the success of regenerative farming in Canada hinges on embracing diverse economic models for food production and distribution. While large-scale industrial farms dominate Canada's agricultural economy—accounting for a significant portion of revenues and exports—small-scale regenerative farms face unique pressures to sustain operations that prioritize ecological sustainability over mass production.

My research finds that cooperative practices play a central role in the socio-economic structure of relational foodways. Farmers often share resources, including machinery, seeds, and labour to reduce individual costs and create mutual benefits. Examples such as the co-purchasing of seeder drills or shared access to tractors and other implements illustrate how cooperative arrangements enhance the resilience of small-scale farming operations. Such practices also align with the broader goals of relational foodways by emphasizing collaboration over competition. Rural producer networks and urban activist collectives with rural ties exemplify the power of cooperative strategies in regenerative farming. These groups often pool resources and knowledge to achieve shared goals, such as preserving biodiversity, advocating for equitable land policies, and supporting local food systems. However, cooperative models require robust organizational frameworks and trust among participants, which can be challenging to establish and maintain.

Likewise, local circular economies thrive on a cultural fabric that prioritizes regional production, supports local livelihoods, and fosters strong relationships within the community. These economies are sustained by shared values that emphasize the importance of local producers, mutual interdependence, and the reinvestment of resources within the region. Trust and collaboration act as the foundation for these networks, enabling practices such as direct sales, cooperative ventures, and resource sharing. By embedding economic activities within a web of social connections and cultural values, local circular economies reinforce both economic resilience and community well-being. Strengthening local circular economies is a key goal of relational foodways. By prioritizing local production, distribution, and consumption, regenerative farming systems create self-reinforcing economic networks that benefit communities and reduce dependency on global supply chains.

However, access to these networks is often limited by socio-economic factors. Middle- and upper-class households dominate participation in Alberta's AFNs, as they can afford the premium prices associated with sustainably produced goods. This disparity highlights the structural inequities that persist within localized food systems, where accessibility and affordability remain significant barriers for economically disadvantaged populations. Beyond cost, the spaces in which most AFNs operate–such as farmers markets, CSA programs, organic stores, trendy restaurants, and Community Gardens[75]–have been critiqued for their "whiteness" and assertion of privilege (Allen, 2008; Mares & Peña, 2012; Slocum, 2006). Research by Karla Hanson et al. (2019) and Yuki Kato (2013), identifies additional factors hindering participation in AFNs or CSAs, including limited produce variety, unfamiliarity with the model, high upfront costs, and time-intensive provisioning. The location and hours of pick-up points are also a concern, as these are typically situated in profit-driven areas rather than in lower-income neighbourhoods, further restricting access.

In Calgary, some efforts have been made to address these barriers. Local food producers have collaborated with the City to establish more accessible pick-up and pop-up locations at C-Train stations and community association centres, as well as offering door-to-door delivery services for an additional fee. Michael Gavin of RRUF acknowledges these challenges in his operations and works to mitigate them within the constraints of the existing economic model. His farm diversifies produce offerings to maximize customer choice and allows CSA members to swap produce at pick-ups. However, these options are limited by the kinds of produce the farm can grow to remain profitable, or at least break even. RRUF also provides split payment plans instead of requiring full upfront costs and maintains a relatively lower share price compared to

[75] To learn more about Calgary's Community Gardens, see https://www.calhort.org/resources/find-a-community-garden/#/action/Alpha/value/ALL/cid/771/id/8501/listingType/O

similar programs. While customers can choose between two pick-up locations and timeframes, logistical and financial limitations make further expansion of these options unfeasible. In addition to CSA programs, case study farms distribute products through online subscriptions, farmer cooperatives, wholesale grocers, and on-farm slaughter. Beyond market transactions, food flows outside the economy through collective cultivation, donations, and food rescue networks, underscoring the importance of community-oriented solutions to food access.

The Division of the Fruits of Labour

Economic inequities are deeply embedded in Alberta's food systems. To understand these dynamics, Bernstein's (2010) agrarian questions–"Who gets what?" and "What do they do with it?"–help unpack the social division, distribution, and uses of income in regenerative farming; rather, the "fruits of labour." While industrial farms benefit from government support and economies of scale, small-scale farmers face unique challenges, including rising input costs, inflation, supply-chain disruptions, and unpredictable weather events. Marcus speaks to this:

> "After over ten years of operation, HBTA has yet to see a profit year; so far, that critical part of regenerative and sustainable agriculture has eluded us. Like many Canadian farms, we rely on off-farm income. Farming and feeding our community operate at a financial loss, despite efforts to achieve profitability. Post-pandemic costs and economic pressures and certification challenges make value-added production difficult. The way agriculture is set up in Canada is designed for large entities, leaving small producers without essential support like feed producers, abbatoirs, breeders, and distribution. They are all sort of locked away from small producers. So it has been a real financial burden to keep on farming."

My research reveals how these challenges manifest in diverse socio-economic contexts and the strategies employed to navigate them (Table 11).

Socio-economic Relations

Not-for-Profit Peri-Urban Farm	• goal is not to expand operations but to sustain ecological practices, build agricultural skills among community members, and increase food security for vulnerable populations • donations and grants support operational expenses (repairs, infrastructure upgrades) and programming (educational workshops, events, community partnerships) rather than household consumption or individual wages • financial precarity remains a barrier due to model of dependency
Urban Farm Business	• operates within market-driven constraints, balancing profitability with ecological goals • revenue comes from direct sales through farmers markets, CSAs, and local restaurants • reinvests income into operational improvements and living expenses • high expenses-to-revenues ratio leaves little room for significant savings or hired labour • expansion is challenging due to space limitations and financial constraints
Activist Collective for the Commons	• emphasizes cooperative ownership and resource sharing instead of financial generation • practices collective cultivation with the broader goals of community empowerment, political education, and resistance to neoliberalism • reliance on voluntary labour and limited-to-no funding pose some challenges, with financial investments taking a backseat to the goal of reCommoning
Rural Producer Networks	• income is derived from a mix of on-farm activities (crop, livestock sales, farm tourism) and off-farm activities (cooperative ventures, educational initiatives, consultations) • sales are often limited by the high costs of labour and specialized inputs • reinvest income into equipment, land improvements, and collective marketing efforts • rising value of farmland and consolidation of agricultural resources present barriers, limiting access for new or smaller producers • some generate enough income to expand operations incrementally, while others focus on maintaining existing practices rather than pursuing growth

Table 11: Socio-economic Relations Across Field Sites

Across all four field sites, income is predominantly reinvested into operational needs, including equipment and fencing repairs, infrastructure upgrades (e.g., registered egg grading station, cooler, barns, etc.), and input costs (i.e., seeds. feed, etc.). Alone, few have the financial capacity to expand their operations or generate significant savings. Moreover, many do not account for their own labour hours in financial calculations, as doing so would render their products unaffordable for most consumers. This financial precarity is further exacerbated by market structures that prioritize high-yield, export-oriented agriculture over ecologically sensitive practices. Another cross-cutting theme is ownership and land access. The question of land ownership remains central to socio-economic relations in relational foodways. Some producers own their land and use it to support diverse activities such as custom grazing, while others rent or collaborate in cooperatives. The rising value of farmland, driven by commodity

prices and urban development, limits access for small-scale and first-generation farmers, as many retiring farmers understandably opt to sell. The observed migration of urban SPIN farmers into the countryside (e.g. Marcus, Rod, and Michael) reflects efforts to overcome these barriers, but such transitions require substantial financial capital.

The economic viability of regenerative farming also varies across my field sites. While not-for-profit and activist models emphasize ecological and social goals, they often struggle with financial sustainability. Urban and rural producers face market pressures that favour industrial-scale operations, making it difficult for small-scale farmers to compete without external support. As demonstrated, government subsidies and incentives, when available, tend to prioritize larger farms, further marginalizing small-scale regenerative operations. Each case study employs distinct strategies to address financial challenges, from diversifying income streams to engaging in cooperative practices and securing external funding. These efforts demonstrate the adaptability and resilience of small-scale farmers, even within a system that disproportionately supports conventional agriculture. One research participant reflected:

> "Technologies and infrastructure are not prioritized for fostering local or regional food security—they're funded primarily to grow crops and livestock for export. While some investment and policy attention are directed toward developing regional economies, it's clear that this is not where the majority of energy or resources are focused. Many farmers feel trapped on a treadmill driven by this agenda. To chase profits, they're forced to acquire more land, invest in specialized equipment, and rely on pesticides, herbicides, and proprietary seeds. But where are these costs truly felt? What about the hidden externalities that remain invisible to the average consumer?"

This quote highlights the pervasive issue of "hidden externalities" in industrial farming–those unaccounted-for costs that ripple through social, environmental, and economic systems but remain obscured from the average consumer. These externalities arise as farmers navigate a profit-driven agricultural system, often feeling pressured to expand operations, adopt

specialized technologies, and depend on chemical inputs and proprietary seeds to stay competitive. While these choices may increase short-term productivity, they generate long-term consequences that are borne by ecosystems, communities, and future generations. As discussed in Chapter 1, the reliance on pesticides, herbicides, and synthetic fertilizers contributes to soil degradation, water contamination, and biodiversity loss. These chemical inputs often harm non-target species, including pollinators essential for crop production, and leach into waterways, causing eutrophication and the collapse of aquatic ecosystems. Large-scale monocropping, encouraged by market demands, further exacerbates these issues by reducing crop diversity and depleting soil nutrients. The drive for increased land acquisition also promotes deforestation and habitat destruction, contributing to climate change through increased greenhouse gas emissions.

While industrial farming technologies and proprietary seeds promise efficiency and higher yields, they come with financial burdens for farmers. Many are locked into cycles of debt, as they are forced to invest in expensive equipment and purchase patented seeds annually rather than saving their own. This dependency enriches agribusiness corporations and larger operations subsidized for export-oriented production while placing small-scale farmers in precarious financial situations. Rural communities suffer as local farms are replaced by large agribusinesses, leading to a loss of jobs, the erosion of local food systems, and a decline in community cohesion. Furthermore, farm workers in industrial systems frequently face poor working conditions, low wages, and exposure to harmful chemicals. These costs are often passed indirectly to consumers, who pay for the environmental and social damage through higher taxes (for cleanup or mitigation programs) or increased health care costs resulting from pesticide exposure.

For the average consumer, the true costs of industrial agriculture remain hidden behind the artificially low prices of food in grocery stores. These prices fail to reflect the environmental

destruction, social inequities, and long-term health risks embedded in the production process. Instead, the system externalizes these costs, allowing corporations to prioritize profits while consumers unwittingly bear the burden of degraded ecosystems, public health crises, and reduced food security. Addressing these hidden externalities requires systemic changes to how agriculture is valued and supported. Policies must shift from subsidizing industrial farming to investing in regenerative practices that prioritize ecological health, social equity, and long-term sustainability. Transparent labeling, environmental taxes on harmful inputs, and incentives for local food systems can help internalize the hidden costs, making them visible to consumers and decision-makers. By examining these socio-economic relations across field sites, it becomes clear that regenerative farming is shaped by the interplay of market forces, land access, and resource distribution. While the challenges are significant, the diverse strategies employed by farmers and collectives highlight the potential for regenerative practices to foster more equitable food systems that scale out and root down.

Degrowth & Decommodification

The concepts of degrowth and decommodification offer transformative frameworks for understanding the socio-economic dynamics of relational foodways in Wild Rose Country. Regenerative farming challenges the dominant paradigm of industrial agriculture by prioritizing ecological sustainability, community well-being, and economic equity over growth for profit. By asking the agrarian question "At what scale?" (Desmarais, 2015), I explore how these principles manifested across my field sites, highlighting the potential of regenerative practices to "scale out"–as opposed to up–through economies of scope and "root down" by embedding themselves in local socio-ecological systems. By examining the interplay between market forces, land

access, and resource distribution, I highlight the strategies employed by my research participants to reimagine food systems beyond capitalist development logics.

Degrowth challenges the "bigger is better" ethos of the industrial agrarian regime, advocating instead for thoughtful scaling practices that value diversity, quality, and interconnectedness over sheer quantity (Akbulut, 2017; Kallis, 2017; Vergara-Camus, 2019). Scaling is thus reframed from linear growth to holistic expansion through economies of scope and territorial scaling (de Roest et al., 2018; Mier y Terán Giménez Cacho et al., 2018). This approach argues for a politicized process of social reorganization, conscious self-limitation, and a reduction in global social-energetic metabolism that 'invokes questions of production for whom, of what, under what conditions, and with which consequences' (Akbulut, 2021). Human ecologist Philip Loring (2022) calls into question the very (colonial) notion of scaling, advocating instead for "a vast patchwork quilt of smaller scale solutions that vary dramatically from place to place, over space and over time, in an interplay with local climate, ecology and culture." Rather than asking if a practice 'scales' universally, he argues for the focus to be on whether a practice works for specific communities and places. Questions like "Does it align with or enhance culturally significant practices and systems?" or "Is this approach in harmony with the people and ecosystems of this region?" become critical in evaluating its effectiveness.

Decommodification debates further enrich this discussion by exploring how food systems can move beyond market-driven logics. While most regenerative farmers in Alberta operate within capitalist structures to meet their living needs, some initiatives aim to reduce dependency on financial capital. Examples include food-sharing programs, collective cultivation projects, and education initiatives that build community capacity for food production. For instance, the Grower Activist Collective for the Commons exemplifies efforts to decommodify food by

prioritizing cooperative ownership, food sovereignty, and grassroots political education over market logics. Activities such as collective cultivation and seed-sharing emphasize shared stewardship, resist the commodification of seeds and agricultural inputs, and build solidarity. Similarly, the not-for-profit farm Grow Calgary integrates decommodification principles by prioritizing community engagement, food security for vulnerable populations, and ecological stewardship over profit. However, such initiatives often depend on volunteer labour and external funding, raising concerns about sustainability and equity for women who may already carry a double burden of productive and reproductive social labour (Gross, 2009; Som Castellano, 2016). Gaps also persist in the accessibility and affordability of skill-building certification programs, such as Permaculture Design Certificates (Massicotte & Kelly-Bisson, 2019). As George Henderson (2004) and Mares and Peña (2012) argue, decommodification efforts must address structural inequalities to ensure that marginalized populations are not further excluded from food systems. Nevertheless, these models demonstrate the transformative potential of relational foodways to reimagine food systems as communal, rather than commodified, endeavours.

Both urban farm businesses and rural producer networks navigate the interplay between ecological goals and economic realities, albeit in distinct contexts. The urban farm business RRUF operates within a market-driven framework, relying on direct sales through CSA programs, farmers markets, and local restaurants as its primary revenue streams. Income is reinvested into infrastructure upgrades and low-impact mechanization, yet high urban land, gas (having to travel to nine plots scattered throughout the city), and labour costs constrain opportunities for expansion, underscoring the tension between sustainability and profitability in urban agriculture. Similarly, rural producer networks embody economies of scope by

diversifying activities such as crop production, livestock grazing, and educational programming. These networks may reinvest income into shared equipment, land improvements, and collective marketing, fostering resilience against market volatility. However, systemic challenges, including rising farmland values and industrial consolidation, limit access for new and small-scale producers. Cooperative practices within these networks (e.g., YYCGD, Mountain View Growers) offer a buffer against economic pressures, highlighting the potential for collective strategies to support sustainability and equity in agricultural systems.

With patience, creativity, and strong social networks, another viable option for small-scale farmers is an incremental approach to scaling out and rooting down. For example, when Lachlan began growing a market garden at HBTA six years ago, he started with a broadfork and his two hands. As the farm operation grew, so did Sarah and Marcus' investments of agricultural implements, which they welcomed Lachlan to use. This included a Kubota M7040 tractor with a rotary plough–which was invaluable for low tilling to decompact the hard soil and incorporate OM into the deeper soil strata–and a two-wheel BCS tractor with PTO-driven attachments for harrowing beds and mowing weeds before they went to seed. Lachlan and Marcus designed the 1-acre plot to be split into quarters, with ¾ cover cropped and a three year rotation of a ¼-acre vegetable garden. At that time, they hand-broadcasted peas and oats in the cover crop patches, as well as a mixture of five grasses, three alfalfa varieties, and vetch in the perennial pastures to join the volunteer clovers and trefoil. Compared to traditional drill planting or precision seeding, broadcast sowing requires 10-20% more seed, additional labour to lightly bury the seeds for maximum germination, and may result in overcrowding.

In 2023, HBTA and Little Loaves Farm co-purchased a seeder drill, which Lachlan and I will also be able to use for seeding cover crops and annual rye grass pathways in the garden.

Although the majority of our work is done by hand with rudimentary tools, the incorporation of mechanized implements (e.g., garlic planter, potato harvester, paper pot transplanter, drip lines), has saved us time and backaches. However, this scaling introduces challenges, such as increased reliance on fossil fuels and plastic irrigation systems, requiring constant negotiation to align growth with regenerative principles. These choices illustrate how regenerative farmers grapple with balancing ecological goals against the economic pressures of modern agriculture.

Regenerative farming in Wild Rose Country offers one pathway for addressing the socio-economic and ecological crises of contemporary food systems. By prioritizing collaboration, diversity, and ecological care, these practices challenge the industrial paradigm and envision a more just and sustainable future. My research argues that the viability of regenerative agriculture–operationalized through relational foodways and not a co-opted corporate model–depends on 1) cooperative arrangement for shared access to equipment and resources to reduce individual costs and foster mutual support, 2) community partnerships between local organizations and governing bodies to enhance accessibility and visibility, and 3) gradual scaling based on ecological and economic feasibility that prioritizes long-term sustainability.

Additionally, a relational foodways framework transcends farming, encompassing diverse methods of sustenance such as foraging, fishing, and hunting. These practices underscore the deep interconnectedness between food systems, ecological restoration, and community well-being. Central to this framework is the recognition of cultural-spiritual relations, which emphasize the respectful use of most if not all parts of an animal and the revitalization of traditional skills. Practices like hide-tanning, basket-weaving, food preservation, and the use of medicinal plants not only preserve cultural heritage but also reinforce sustainable, reciprocal

relationships with Nature. Kolby reflects on the principles of degrowth, decommodification, and relational foodways:

> "Regenerative farming is needed en masse; the scale needs to be in broad strokes across the landscape. But no one farmer can single-handedly think that accomplishing regenerative life is possible. It requires a larger village and a holistic inclusion of all living beings... The goal of regenerative agriculture should be for it to come to an end. What's beyond regenerative is generative—giving more to the land than we take, so that future generations can thrive. Let us hope that we've repaired and infused enough life back into the ecology so it can sustain itself. So that our presence leaves a place that is healthier, more abundant, diverse, and beautiful."

Kolby's vision aligns with degrowth ideals, emphasizing care, reciprocity, and intergenerational stewardship. By reframing resources and labour beyond capitalist logics, regenerative foodways create space for solutions grounded in community, imagination, and shared values. Degrowth and decommodification within relational foodways challenge the industrial paradigm of agriculture, offering opportunities for regenerative practices to scale out and root down. While significant barriers remain, the strategies employed across my field sites demonstrate the potential for relational foodways to foster resilience, equity, and ecological care. Achieving this vision requires systemic shifts in policy, cultural values, and resource distribution, ensuring that food systems enrich both communities and ecosystems for generations to come.

Gendered Relations

Gender relations play a central role in shaping participation, leadership, and access to resources in food and farming systems. This section builds on my research into relational foodways to examine how gender intersects with age, ability, and cultural norms to define the conditions of labour and the allocation of responsibilities within Canadian regenerative farming communities. While regenerative farming often aims to foster equitable practices, traditional divisions of labour and power dynamics persist, creating challenges and opportunities for social change.

In contemporary Canada, regenerative agriculture reflects broader societal trends toward gender equity, with both men and women represented in leadership, decision-making, and physical labour. My research revealed examples where men and women owned land together or independently, purchased agricultural inputs, managed sales, and conducted agroecological research. Despite this progress, a gendered division of labour remains evident in many contexts, influenced by societal norms and practical considerations, such as physical risk, skill specialization, and child-rearing responsibilities. For instance, during seasonal work events like yak tagging or turkey loading, gender-specific roles were often observed. Women frequently took on tasks perceived as lower risk or requiring precision, while men performed physically demanding or riskier roles. On yak tagging day, for example, men would don themselves with padded vests and jump into the corral of horned yaks to guide into the chute, while women swiftly restocked the tag gun, pierced the yearlings' ears, and recorded the information. Well into the midnight hours of turkey loading, women would herd small flocks at a time into the inclined loader while the men would throw each (heavy and flapping) bird into the truck cages.

Shearing is a profession that is also hard on the body, as dozens to hundreds of sheep weighing 45 to 160 kilograms need to be carefully flipped onto their backs and adjusted between the shearer's legs. Male shearers outnumber women globally, but women play key roles in keeping the process running smoothly. At Regenera Ranch, women worked alongside men to herd the flock through chutes, sweep away debris between shears, gather fleeces to load into burlap sacks, trim overgrown nails and treat cuts, and monitor the shorn flock for signs of distress. When I participated in my first steer harvest, a licensed male butcher performed the slaughter, a neighbour hoisted them up from his tractor, and the other menfolk helped prepare the

steer for transport. Alongside a 90-year-old male rancher, I was responsible for bagging the livers, hearts, and kidneys to process at home.

None of this is to say women cannot or are not allowed to perform the tasks typically taken on by men; in fact, many women do. During my first year working with Winter's Turkeys, before they purchased a mechanical loader, men and women alike deadlifted hundreds of turkeys per night from the ground to throwers on a platform above our heads. Bruised and cut from the wings, I was out of breath but kept up my momentum lifting one bird after another. By the end of the evening, I was the only female left in the group and one male worker asked, "who are you trying to impress?" I found this assumption to be interesting as he did not ask it to any of our male counterparts. Gendered roles, while not exclusive, reveal how cultural norms and assumptions about physical ability influence task allocation.

Paid and unpaid labour also reveals significant gendered dimensions. Paid roles in my case studies—such as operators, employees, or contractors—were divided relatively equitably between men and women. However, unpaid or in-kind roles, such as volunteers, family members, or apprentices, were more common among women, particularly in tasks related to caregiving or food preparation. The lack of financial compensation for such contributions highlights a persistent undervaluing of women's labour, echoing broader critiques in the literature on gender and agriculture (Trauger, 2004; Sachs et al., 2016). Alex from the Young Agrarians speaks to the generational shifts in gender roles and norms. "I was talking to a retired grain farmer, who, in the 1990s, went into a loan office and the officer had never spoken to a woman before about farming. "Where's your husband? I need to talk to him," he asked her."

Misogyny is still pervasive across the supply chain, with gender bias, racism, and transphobia influencing hiring decisions, access to resources, and sales channels. Dani Chappell

is acutely aware of the gendered and binary nature of agriculture. As a transgender horticulturist living in a politically conservative province, she experiences fear and marginalization on a daily basis. Even at the weekly farmers market, Dani sometimes feels the tension of what becomes a complicated social dance. “The emotional labour involved–being sure I use a higher pitched “customer voice,” putting more effort into my looks, not forgetting to wax facial hair, or taking on the role of “ambassador” for trans rights–adds onto the isolation that is farming,” she says. From mechanics to fertilizer suppliers, consulting clients to box scheme customers, social complexities add another layer to an economically challenging sector.

Feminist agroecology is not only about gender equity but also about reimagining property relations and labour in more just and sustainable ways. Although males are still the predominant head operators on Canadian farms, and their female counterparts are not always financially compensated for their productive and reproductive labour, there exists a great deal of mutual respect and value for the contributions of all involved in regenerative farming operations. Despite the challenges she faces, Dani sees food as an avenue to drive conversations that lead to social change. For Alex and Kolby, who spend most of their time in the alternative agriculture world through the Young Agrarians, farming as a woman has either been a very positive experience or one they don’t think much about. Kolby reflects:

> “I don’t feel like I’m a woman in this industry. Well, I don’t feel like what I’m doing is industrial in any way shape or form. Perhaps if I was more on the commodity side of things or attending meetings that have their own boards of representation, then I’d encounter struggle in terms of governance and decision-making. Sure there are still times when I run into what, to me, is clearly a male propped-up paradigm of how farming should be done and by whom. Like being the only woman on a panel of speakers at an agricultural conference. But in this small, diversified, very regionally-focused kind of farming, being a woman is often celebrated. Because of the support and rapport with many other female farmers with whom I’m doing similar things, I don’t feel alone, small, or insignificant”

Heather, Highfield Regenerative Farm's former Operations Manager, has worked in Calgary's local food system for the past decade. Before joining Highfield's all-male board of directors, she played an integral role in activating the Hillhurst Sunnyside Community Association community garden, pantry program, and farmers market. With empowerment to make day-to-day decisions, Heather has worked closely with hundreds of urban agrarian volunteers and Highfield's 7 grower-members, many of whom are women. She now coordinates the University of Calgary Campus Food Hub, which improves students' access to healthy, affordable food. Across my field sites, Laurel and Lyle, Sarah and Marcus, Rita and Jerremie, Dani, Sara and Oscar, Richmond, Rod, Kolby, Maryann, Lachlan and I instill in our daughters and sons that they can do anything they put their mind to, farming-related or not.

Gendered relations in regenerative farming intersect with divisions of labour by age and ability. Children, elderly folk, pregnant women, and workers with injuries or disabilities were all integral to the farming communities I studied. Their contributions were diverse and valued, with tasks tailored to their capacities and limitations. Children, for example, often helped with light tasks such as collecting eggs or gathering berries, while elders prepared food, lent wisdom, and watched over younger participants. These intergenerational dynamics underscore the importance of fostering inclusive farming practices that value the contributions of all participants, regardless of age or physical ability. The literature on intergenerational knowledge exchange in agriculture highlights the critical role elders play in preserving traditional practices and fostering cultural continuity (Zimmerer, 2000; Howard, 2003). Similarly, children's involvement nurtures curiosity and a sense of responsibility, creating pathways for future engagement in regenerative farming.

The social relations of production in regenerative farming are shaped by a combination of cooperation, reciprocity, and market pressures, with distinct challenges for gender equity. In my

case studies, these challenges varied across the four farming contexts (Table 12). Nevertheless, these findings reflect broader challenges in achieving gender equity within regenerative farming. The undervaluation of unpaid labour, the persistence of cultural norms, and the limited financial support for small-scale farmers all contribute to inequalities in the social relations of production.

	Gendered Relations
Not-for-Profit Peri-Urban Farm	• gender roles are relatively equitable, with women and men sharing leadership and labour responsibilities • male President and Senior Farm Manager, but the majority of executive board members and volunteers are women • organization's reliance on volunteer labour, lack of financial compensation for all involved, and high turnover rate of executives and volunteers disproportionately affect women
Urban Farm Business	• predominantly operated by sole male proprietors; to a lesser extent by couples and single female operators • paid labour opportunities are often concentrated in the hands of the primary operator, reflecting the economic pressures of maintaining profitability • apprentices and volunteers play supporting roles, but pathways into paid or higher-paying positions remain limited
Activist Collective for the Commons	• central role of reciprocity and volunteerism, with women playing key roles in organizing and coordinating activities • unpaid nature of the labour creates challenges for sustaining long-term participation, particularly for women balancing caregiving responsibilities
Rural Producer Networks	• social norms often influence task allocation, with men dominating riskier or physically demanding roles and women taking on caregiving, food preparation, and administrative tasks • mutual respect and collaboration is present, but traditional gender norms occasionally limit women's full participation in decision-making

Table 12: Gendered Relations Across Field Sites

Despite these challenges, regenerative farming offers significant opportunities to advance gender equity in food and farming systems. By emphasizing cooperation, reciprocity, and community engagement, regenerative practices can create spaces for women to lead and participate meaningfully in food systems. Initiatives that recognize and compensate unpaid labour, provide training and mentorship, and challenge traditional gender norms are particularly impactful. For example, programs that support women-led farms, such as the Canadian

Agricultural Human Resource Council's National Women in Agriculture and Agri-Food Network and the U.S.-based Women, Food and Agriculture Network[76] (WFAN), have demonstrated the potential for empowering women through access to resources and leadership opportunities. Similarly, community-based approaches that integrate intergenerational knowledge exchange can bridge gaps in experience and foster inclusivity.

Intergenerational Relationships

Intergenerational relationships are vital to the sustainability and evolution of regenerative farming practices. Collaboration between elders and youth fosters the exchange of traditional knowledge, innovative ideas, and practical skills, ensuring that farming communities adapt to contemporary challenges while preserving their cultural and ecological roots. These relationships extend beyond farming techniques to encompass values, rituals, and relational foodways that strengthen community bonds. Yet, the agricultural sector faces a pressing generational challenge: fewer young people are choosing farming as a livelihood, raising concerns about the continuity of agricultural knowledge and practices (White, 2020). This section explores how intergenerational collaborations observed across my field sites support regenerative farming, the barriers posed by the generation gap, and potential pathways to create spaces for knowledge exchange and relationship-building.

Elders bring wisdom, patience, and a wealth of experiential knowledge to farming communities, while youth offer curiosity, energy, and innovative approaches. This synergy is particularly evident in activities such as cultivation, animal stewardship, food preparation, and community care. At Winter's Turkeys, for example, three generations currently live on the farm, blending traditional practices with modern innovations. Laurel and Lyle's reflections on the

[76] https://wfan.org/; https://cahrc-ccrha.ca/national-women-agriculture-and-agri-food-network-project

contributions of their parents and grandparents highlight the significance of intergenerational support in building the farm's infrastructure, customer base, and resilience. Laurel's mother, Corinne, underscores the emotional and cultural value of farmland, as it connects generations through shared history and purpose. Over a cup of tea, Corinne, looks past me and says:

> "The floor in our house is so significant because Darrel's dad laid it. I was always so happy when our children played on it, and now my grandchildren are here. The girls have already received such value just being raised on a farm and in a farming family. They have truly enriched our lives. It is heartbreaking for me to see development after development taking over farmland. We are blessed to have been able to pass our farm down to the next generation."

Similarly, Kolby's farming experience illustrates how intergenerational collaboration can extend beyond bloodlines. Learning from farm elders Tim and Linda, Kolby not only gained practical skills but also became part of a vision for an agricultural cooperative rooted in trust, patience, and shared values. This case exemplifies how farming communities can cultivate "human ecology," creating networks that transcend individual lifetimes to steward land and resources collectively.

> "At first I would come every weekend to learn how they farm with draft horses," she smiles. "Organically, it turned into dreaming together and we have slowly been putting that dream into motion. Like any kind of ecology, human ecology and community-building and trust-building can't be accelerated like we imagined it could at the beginning. Perhaps our shared vision of an agricultural cooperative (both on the quarter with multiple people willing to engage in a humble and simple life, and with surrounding farms) will come into being. It might take a lifetime or a couple lifetimes so that this land can be stewarded by enough hands and hearts with an aligned farming philosophy. Tim and Linda have passed along so many things: wisdom, assets, infrastructure, equipment, goodwill, and their relationships with their customers loyal to the farm. With some creative, niche farming and value-added products, I don't see why this quarter couldn't financially support quite a few people to be comfortable."

Relational foodways offer a framework for integrating intergenerational knowledge exchange into the daily life of farming communities. Activities such as shared meals, seasonal events, and communal farming tasks foster trust, collaboration, and a sense of belonging. At

Regenera Ranch, shearing day is a multi-generational affair, with each person—regardless of age or ability—valued for their contribution. Elders supervise and watch for overgrown hooves to trim, youth and children assist in packing the wool with enthusiasm, and the collective effort strengthens community ties. Gathering as an Activist Collective in GFL, children engaged in tasks such as sowing, weeding, and harvesting while learning about biology, responsibility, and interpersonal skills. These gatherings also created informal networks of care (Akbulut, 2017), with participants watching one another's pets and supporting each other through illness or hardship, as earlier described. Such spaces allow communities to recreate intergenerational bonds that are often eroded in urbanized, industrialized societies, and among newcomer communities.

Despite the benefits of intergenerational collaboration, agriculture faces a critical generational challenge: many young people are reluctant to pursue farming as a livelihood. According to Ben White (2020), the challenges include economic instability, the physical demands of farming, and the perceived lack of prestige associated with agricultural work. Additionally, the increasing corporatization of agriculture and rising land prices make it difficult for younger generations to enter farming independently. Lyle's observation that "each generation will face its own challenges" underscores the need for adaptive solutions to this generational problem. Programs that lower barriers to land access, provide financial incentives, and support innovative farming practices could help attract more youth to farming. Education and mentorship programs, such as those led by elder farmers like Tim and Linda, demonstrate how experiential learning and cooperative models can inspire the next generation to engage in agriculture.

Intergenerational collaboration in regenerative farming is not limited to production but extends into relational foodways—systems of care, community building, and cultural expression through food. At Sara and Oscar's dinner table, community members co-created stories, music,

and memories while eating Chilean *empanadas*, alleviating stress and loneliness. These relational practices build emotional resilience and strengthen community cohesion, providing a foundation for sustainable farming systems. Even emotionally challenging tasks can become opportunities for intergenerational learning and bonding. For several years, Lachlan and I helped Sarah and Marcus cull their spent layers and drakes. Beforehand, we would all take a moment to give gratitude to higher spiritual powers and to the birds, praying that no one would incur injuries and the birds would not be stressed. The Riedners' two children would observe us catch each bird and wait for them to relax before gently placing their neck into a cone. The playful curiosity of children–such as their youngest playing with a severed chicken foot or arranging duck heads in the snow–adds levity to difficult moments and reinforces the cyclical nature of life and death in farming. These experiences highlight the importance of incorporating all generations into farming activities, not only to share labour but also to nurture a sense of shared purpose and interdependence.

To address the generational problem in agriculture, communities must create pathways for youth to see farming as a viable, rewarding livelihood, and not just in economic terms. This includes addressing structural barriers such as land access, market competition, and the undervaluation of agricultural labour. Policy interventions, such as subsidies for young farmers and incentives for intergenerational land transfer, can play a crucial role. Community initiatives can also support intergenerational collaboration. For example, cooperative models that pool resources and share responsibilities provide an alternative to the individualistic model of farming. Educational programs that blend traditional knowledge with modern techniques can equip youth with the skills and confidence to pursue regenerative farming. Moreover, cultural

practices that honour elders and involve youth in decision-making can reinforce the value of intergenerational collaboration.

Intergenerational relationships and gender dynamics are fundamental to the sustainability and equity of regenerative farming practices. Young and old alike collaborate to preserve and evolve agricultural knowledge, while gendered dimensions reveal both persistent inequalities and opportunities for advancement. By creating spaces for knowledge exchange, inclusive participation, and relationship-building, communities can address challenges such as the generational problem in agriculture and structural barriers that limit women's recognition and participation. Relational foodways provide a framework for integrating these practices into daily life, fostering resilience, equity, and sustainability. Moving forward, it is essential to support cooperative models, compensate unpaid labour, challenge traditional norms, and cultivate a culture of care that values the diverse contributions of all individuals across generations, genders, and abilities.

Ecological Relations

Regenerative farming emphasizes the interconnectedness of ecological systems, advocating for practices that work with natural cycles, promote biodiversity, and steward land and water resources responsibly. These ecological principles are vital for addressing the environmental challenges faced by farmers, particularly in the context of increasing climate variability and extreme weather events. This section explores how regenerative farming practices adapt to environmental pressures, the policies and systemic barriers shaping farmers' responses, and the lessons learned from my experiential farming and farm exchanges in Wild Rose Country.

Farmers in Alberta have faced significant climate pressures in recent years, including prolonged droughts, wildfires, unpredictable precipitation patterns, and extreme weather events

such as hail storms and tornadoes–including a size four that grazed HBTA in 2023. These conditions disrupt natural cycles, challenge water availability, and threaten the productivity of agricultural ecosystems. From 2020 to 2023, drought conditions in Alberta forced livestock farmers to move cattle to feedlots months earlier than planned and caused widespread anxiety among vegetable producers reliant on dwindling dugout water supplies. Although regenerative practices such as soil mulching, rotational grazing, and native pasture reseeding support moisture retention and ecosystem resilience, these methods cannot fully mitigate the impacts of prolonged droughts without sufficient water. Urban farmers and gardeners face unique challenges as well. Climatic pressures such as record high temperatures, poor air quality and extended cloud coverage from wildfires, compacted urban soils, and flooding exacerbate the difficulty of growing food sustainably in city environments. Urban-specific restrictions—such as limitations on polytunnel sizes or stringent yard maintenance codes—further constrain mitigation strategies.

Nevertheless, urban and rural farmers across Wild Rose Country are implementing diverse adaptive measures to respond to these challenges. For instance, approximately 69.6% of Alberta farms maintain windbreaks or shelterbelts to reduce soil erosion and mitigate wind damage (St. Pierre & McComb, 2023). Vegetable producers often use drip irrigation, mulch, and row covers to conserve water and protect the soil. Targeted application of Bacillus thuringiensis kurstaki (BTK) helps manage pest populations, which have increased due to milder winters. Fencing off and renaturalizing riparian areas helps protect water quality and prevent soil erosion. In 2020, 30.5% of farms in Alberta reported using rotational grazing, which allows for a recovery period for plant regrowth (St. Pierre & McComb, 2023). Many farmers are also transitioning to drought-resistant crops, such as barley, which are better suited to Alberta's changing climate.

While these adaptive strategies demonstrate the resilience and innovation of farmers, structural barriers persist, particularly for small-scale farmers. Many small-scale farmers struggle to access affordable insurance due to high premiums and eligibility requirements that favour larger operations. Without insurance, these farmers face significant financial risks when crops fail or infrastructure is damaged by extreme weather, as previously described by Landon. Regenerative farming practices often require substantial upfront investments in materials, equipment, and infrastructure. For example, installing drip irrigation or fencing off riparian areas can be prohibitively expensive without access to financial support. The lack of access to capital disproportionately affects small-scale farmers, limiting their ability to adopt sustainable practices. Ongoing supply chain issues from the pandemic have also delayed access to essential materials such as seeds, irrigation equipment, and pest management supplies, further hindering farmers' ability to implement timely adaptive measures. These barriers have far-reaching consequences. Farmers without insurance or sufficient capital are more vulnerable to financial instability, and their inability to adapt quickly to climatic pressures can lead to reduced yields, loss of income, and even farm closures.

Although farmers are taking proactive steps to address climate challenges, supportive policies are crucial to scale out regenerative practices and mitigate systemic barriers. Some policies in Canada aim to help farmers cope with climate change. For one, the Sustainable Canadian Agricultural Partnership (CAP) provides funding for projects that enhance environmental sustainability and climate resilience, such as riparian restoration and energy-efficient farm equipment. However, small-scale farmers often report challenges in navigating the application process and meeting eligibility requirements. The federal On-Farm Climate Action Fund (OFCAF) supports practices such as cover cropping, rotational grazing, and

nitrogen management. Since its inception in 2021, recipient organizations in Alberta have included ECOCERT Canada, Results Driven Agriculture Research, The Canadian Forage and Grassland Association, Canola Council of Canada, and Alternative Land Use Services Canada[77]. While promising, the fund's limited scope and resources restrict its impact. In Alberta, Disaster Assistance Programs offer disaster recovery programs for farms affected by extreme weather, but these programs primarily focus on recovery rather than proactive adaptation, leaving farmers vulnerable to repeated climate shocks. To address these gaps, policy reforms could include expanding eligibility for small-scale farms, streamlining application processes, and providing targeted subsidies for regenerative farming practices.

During my research, experiential learning and farm exchanges were instrumental in fostering horizontal knowledge-sharing among farmers, bridging the gap between urban and rural perspectives. For example, urban participants in farm exchanges gained a deeper understanding of the climatic pressures faced by rural farmers, including drought, wildfires, and pest outbreaks. These exchanges also highlighted the reciprocal relationships among humans, animals, and plants in sustaining ecosystems. Group sharing circles and storytelling further deepened these lessons by creating spaces for community reflection and relationship-building. Through these discussions, participants explored how natural cycles, such as the interplay of soil health, water retention, and biodiversity, are integral to sustainable food production. These exchanges fostered a sense of collective responsibility for land stewardship and encouraged the adoption of regenerative practices across diverse farming contexts.

The ecological relations of regenerative farming vary significantly across my four research field sites (Table 13). Each site navigates unique environmental challenges, adopts distinct sustainability practices, and reflects diverse interconnections among humans, plants,

[77] See: https://agriculture.canada.ca/en/programs/agricultural-climate-solutions-farm-climate-action-fund

animals, and ecosystems. These distinctions highlight the flexibility and adaptability of regenerative farming in addressing site-specific ecological and social needs.

	Environmental Challenges	**Sustainability Practices**	**Ecological Interconnectivity**
Not-for-Profit Peri-Urban Farm	• urban encroachment • limited land availability • soil degradation • poor water quality • in a high wind and hail zone • heightened exposure to air pollution from nearby industrial zones • seasonal droughts exacerbated by urban heat island effects; compound the difficulty of water management • noise pollution from highway	• drip irrigation and mulching used to optimize limited water resources • composting food waste from urban sources supports soil health and nutrient cycling • volunteers and visitors learn about natural cycles, emphasizing the importance of biodiversity and soil regeneration	• urbanites participating on the farm experience the reciprocal relationships between food production and ecosystem health • fosters awareness of how their consumption impacts the environment
Urban Farm Business	• poor air quality from wildfires • compacted soils • limited space for expanding operations • regulatory constraints (limits on polytunnel sizes, aesthetic yard maintenance requirements) • too much or too little sun exposure in certain plots	• no-dig SPIN farming • mulch pathways, add compost to beds • leave roots in, chop n' drop • relies on drought-tolerant and quick-maturing crops to adapt to unpredictable weather • pest control is done by hand (catching cabbage moths, picking off larvae, row cover for flea beetle)	• engage customers and local communities in sustainability initiatives (composting programs, education about the environmental impacts of urban agriculture) • flowering plants for pollinators • increased awareness of eating seasonally
Activist Collective for the Commons	• operates on shared land that often lacks formal infrastructure • vulnerable to extreme weather events (urban flooding due to compacted soil and concrete) • too much or too little sun exposure in certain yards • limited land to expand • squirrels, birds, insect pests	• members collectively regenerate shared resources • decisions about land use and ecological practices are made through consensus, integrating diverse perspectives and knowledge • composting, seed saving, and recycling materials are core practices to maintain sustainability with minimal external inputs	• emphasizes the interdependence of humans and biodiversity, framing ecological practices as acts of care for the Commons • ethnoecological awareness and phenology deepen participants' understanding of natural cycles and their role in them
Rural Producer Networks	• directly affected by large-scale climatic pressures (reduced snowpack and	• windbreaks, shelterbelts, reseeded native pastures help mitigate soil erosion and manage water flow	• often perceive their role as stewards of the land, balancing economic

	freezing, droughts, high temperatures, wildfires) • isolation and limited access to infrastructure amplify their vulnerability to these challenges • predators of livestock: owl, weasel, fox, hawk, coyote • grazers of garden: deer, moose, vole, pocket gopher, porcupine, cabbage moth, flea beetle, root maggot	• rotational grazing to support soil regeneration and reduce overgrazing • organic pest control methods (BTK) to manage pest outbreaks while avoiding chemical runoff • manage riparian zones • pool resources to implement larger-scale practices (shared irrigation systems, cooperative crop storage)	production with ecosystem health • long-term survival of their livelihoods is directly tied to maintaining biodiversity and healthy natural cycles

Table 13: Ecological Relations Across Field Sites

Each field site reflects distinct ecological relations shaped by its context. Peri-urban and urban farms face greater regulatory constraints and spatial limitations, driving innovation in water conservation, space optimization, and community engagement. They leverage their proximity to populous urban areas to engage volunteers and urban dwellers in sustainable farming practices. Activist Collectives that grow for the Commons integrate ecological practices with grassroots movements for social and environmental justice by emphasizing participatory management and shared stewardship. With access to larger tracts of land, rural networks of small- to medium-scale producers focus on landscape-level interventions and cooperative resource management to adapt to climate pressures. Despite these differences, all field sites share a commitment to regenerative principles, emphasizing the interconnectedness of natural cycles, biodiversity, and responsible land stewardship. By addressing site-specific challenges while fostering horizontal knowledge-sharing, these diverse approaches collectively contribute to the resilience and sustainability of regenerative farming practices in Wild Rose Country.

While Alberta's farmers are implementing innovative practices to address climate pressures, structural barriers such as limited access to insurance and capital continue to challenge their sustainability. Policies that prioritize small-scale and regenerative farmers, combined with community-based knowledge-sharing initiatives, are essential to overcoming these barriers and

building resilience in the face of a changing climate. Relational foodways offer a pathway to reimagine agriculture as a reciprocal relationship between humans and ecosystems. Along this path, ethnoecological awareness is grown, fostering sustainability and equity for future generations.

Ethnoecological Awareness

Ethnoecological awareness encompasses the understanding and integration of ecological knowledge across cultures, promoting respect for the intricate relationships among humans, plants, animals, and ecosystems (Molnár et al., 2024). By drawing on traditional and contemporary ecological practices, relational foodways foster deeper connections to the land, support biodiversity, and encourage sustainable stewardship. This section explores how ethnoecological awareness informs regenerative farming practices in Wild Rose Country, with insights from farm exchanges, community observations, and the broader literature on biomimicry and ecological design.

In relational foodways, regenerative farmers cultivate a relationship with plants not just as sources of food but also as medicines and healing agents. Through experiential farming and group sharing circles, my collaborators and I learned the spiritual significance of sacred plants from place-specific Indigenous worldviews (which will not be identified as they are not my teachings to share), and came to re-know the medicinal properties of plants. Lachlan shares how:

> "yarrow is an antimicrobial, antiviral blood clotter, used to stem bleeding or pack a wound when the leaves are pulverized into a poultice. Plantain is also antimicrobial when mashed into a poultice, but works to reduce the pain, swelling, and itchiness of insect stings and bites. The roots and leaves of comfrey heal shallow wounds like cuts, scrapes, and burns, but do not have antimicrobial qualities. So, a pure comfrey salve or poultice could actually spur bacteria growth if used improperly. That is why it is better to pair it with another healing plant that is antibacterial and antifungal, such as poplar bud, in an oil salve or tincture. Commonly used in salves or tinctures to cool and relax strained muscles is mint.

> This plant also helps with digestion when taken internally as a tea, and can help mask the bitter flavour of valerian when brewed with catnip and chamomile for sleep."

We learned how raspberry leaf and red cover flowers are considered 'women's medicine,' sipped as a tea to help with menstrual cramps and aches; while the nutritious stinging nettle is considered 'men's medicine.' In relational foodways, plants are understood as much more than tools for human use; they are integral to pollinator health, soil ecosystems, and fungal networks, demonstrating the interconnectedness of all life forms within an ecosystem. Over the years of fieldwork, my collaborators and I deepened our ethnoecological awareness through phenological observations—tracking seasonal changes and their impact on ecosystems. Lachlan's reflections on spring transitions, such as the calls of wood frogs and the courtship displays of snipes, reveal how attunement to natural rhythms informs his farming practices. For example, these observations help determine the timing of livestock grazing or planting in alignment with ecological cycles.

> "When the sunlit days pick up speed, there are several indicators that announce the arrival of a new season," he says. "From late April to early May when some ice still stands on the ponds, I can hear Wood frogs spawning for about a week. Quacking away, they sound similar to ducks. If I approach too closely, they stop, but if I sit long enough I can see their ripples and hear them croak again. Joining their medley are the chickadees, whose call changes from 'chickadee-dee-dee-dee-dee' to 'cheese-burger.' On the other side of the pond, where the water is more open, I notice groups of Tundra Swans and Snow Geese, who have flown up from the south. As the weeks grow warmer in late May into June, the quacking of Wood frogs is replaced by Boreal Chorus frogs attracting a female to spawn. This is around the time we put our chickens back on pasture."
>
> "Looking upward to the trees, I hear Snipes doing their courtship display. As the male dives down from up high, he vibrates his tail to make a distinctive sound akin to a monkey whooping. Happiness by the Acre's ducks don't seem very phased by his attempts to attract a female. Another sign of spring is the sight of big queen Hummer bumble bees feeding on the first flush of prairie crocus, buffalo berry, and flowering bulbs. Once they get enough pollen and nectar, they find a nesting site for the season. One of my favourite sightings while working on my haskap orchard in the Wildcat Foothills is the blooming of Calypso orchids.

> These woodland flowers are almost exclusively pollinated by yearling bumble bee queens for 1-2 weeks in the beginning of June. They grow symbiotically with a type of fungus that impregnates their tuber underground. The fungi's Mycelial network acts as the roots of the orchids, which naturally don't have much of a root system. This is just one of the remarkable moments of cultivating sustainably alongside a woodland ecosystem with wild fungi."

Phenological awareness also highlights the role of keystone species, such as Calypso orchids and their symbiotic relationship with mycorrhizal fungi and bumblebee queens. While Calypso orchids cannot be cultivated directly in prairie ecosystems, regenerative farmers emulate similar principles by planting native wildflowers for pollinators, installing bee boxes, and restoring riparian habitats. These efforts demonstrate a biomimetic approach to farming—working with natural systems rather than against them. Biomimicry involves emulating the structures, functions, and relationships found in natural ecosystems to enhance sustainability (Dicks, 2023). In contrast to the biophysical overrides of Green Revolution industrial agriculture—such as chemical fertilizers, monocultures, and intensive tillage—biomimicry seeks to harmonize agricultural practices with ecological processes. Richmond's work at Regenera Ranch exemplifies biomimicry in action.

> "The soils here are rather poor from 90 years of overgrazing and applying glyphosate to eliminate brush.," he laments. "This has resulted in the soil being washed out every 15-20 years, badly throwing off a lot of balances here. The slopes are so steep and shallow that the soil dries out very quickly. I want to experiment with planting chicory, plantain, and juniper, along with a number of different legumes like sainfoin, fenugreek, milkvetch, birdsfoot trefoil, and sweet clover. The clover and alfalfa that are there are not thriving. There is a bit of wolf willow, willow, and buckbrush on the pasture, but there should be a lot more poplar trees. We want to grow little gardens of native brush species that will sprawl across the pasture to better capture moisture. We also need to fence off the riparian so the livestock don't ruin it again."

The year before Richmond and his flock settled on Regenera Ranch, he rented a barn and pasture from friends in De Winton. The property featured a large stand of willow, which the ewes had access to. During lambing season, the ewes instinctively headed straight for the willow,

which naturally helps control internal parasites. As a result, their lambs were the healthiest he had seen in 25 years of working with that flock. Richmond noticed similar behaviours while grazing in B.C. clear-cuts, where large stands of willow and alder thrived. By reforesting riparian zones, diversifying pastures with legumes and brush species, and planting drought-tolerant species, he aims to restore soil health and water retention capacity. Richmond's observations of ewes seeking willow for its antiparasitic properties demonstrate how livestock instinctively interact with natural systems, reinforcing the importance of maintaining biodiverse landscapes that support both domesticated and wild species. The ecological benefits of biomimicry extend beyond individual farms. Across Wild Rose Country, many regenerative farmers plant eco-buffers, maintain shelterbelts, and incorporate perennial polycultures to enhance biodiversity, sequester carbon, and reduce the negative externalities of industrial farming (Agriculture and Agri-Food Canada, 2010; Agroforestry and Woodlot Extension Society [AWES], 2018a, 2018b; Paige, 2020; Wonneck et al., 2017). By working *with* the landscape rather than imposing artificial controls, regenerative farming has the potential to align with the ethos of ethnoecological awareness.

Despite its benefits, integrating ethnoecological practices into regenerative farming faces several challenges. While drawing on Indigenous knowledge systems can enrich regenerative farming, it is essential to approach such integration with respect, collaboration, and recognition of intellectual property rights. Farmers must prioritize partnerships with Indigenous communities to ensure ethical practices. Many new farmers lack the intergenerational knowledge or community connections needed to fully integrate ethnoecological practices. Initiatives such as farm exchanges and experiential learning are crucial for addressing these gaps, fostering horizontal knowledge-sharing among diverse farming communities. Furthermore, policies and

market pressures often favour industrialized farming methods, limiting the resources available for regenerative and culturally informed practices. Small-scale farmers may struggle to implement ethnoecological strategies due to financial constraints or lack of access to native plant species and educational resources.

Nevertheless, opportunities exist for expanding ethnoecological awareness. Policies that incentivize biodiverse farming systems, native plant restoration, and community-led land stewardship can create enabling conditions for regenerative farming. Expanding access to programs that teach phenological awareness, biomimicry, and ecological knowledge systems can empower farmers to adopt sustainable practices. Collaborations between farmers, ecologists, and Indigenous Knowledge Keepers can also enhance the integration of cultural and ecological practices. In 2021, YA partnered with Beaver Bundle holder Iiyaohkiimi, Ryan First Diver of the Kainai First Nation, to offer a year-long course, *Blackfoot Phenology for Farmers*. Designed and taught by Ryan, the course introduced regenerative farmers to Blackfoot Ways of Knowing by learning about native plants and animals through the moon cycles. Alongside Ryan's monthly video lectures and online gatherings, where he shared Blackfoot names for a diverse array of ecological beings, participants were encouraged to select a specific site for regular land-based observations. To deepen my understanding of the phenological cycles of Moh'kinstsis, I enrolled in Ryan's course from October 2021-2022, joining others from YA, including Alex, who facilitated the program. Alex reflects on how the course has shaped her perspective:

> "Being well-acquainted with one area over time has impacted how I understand my relationship to the plants that are there, but also the relationship of those plants to the beings around it," Alex shares. "For example, I learned that you can eat the bitter white berries of Red Osier Dogwood; I quite enjoy them. But I noticed that very quickly, all the berries were gone. While highbush cranberries and saskatoons still have berries left on them over the winter, most of the Dogwood berries have been eaten by woodpeckers in the Fall. Being in a single place and watching it change overtime, I learned that these are really important berries for the birds here, and so I shouldn't take too many."

For Alex, who was born in Calgary and spent her childhood foraging for mushrooms and berries, these observational practices offer invaluable feedback for farmers by illuminating how their actions impact surrounding ecosystems.

> "Fostering long-term relationships and understanding is valuable so that you can give animals and plants the space they need at certain times of year to live their lives. You can co-exist. In a way, that's like Treaty, and can translate to relationships with people too. There can be different lives and worlds happening on the land at the same time, each respecting one another's ways. It is being attentive to what's happening and what's important to those around you, and navigating those relationships together. But there has been a great loss of observation, of noticing the needs of others, in more industrial kinds of farming."

Ethnoecological awareness enriches regenerative farming by integrating ecological knowledge across cultures, fostering respect for the interdependence of humans and ecosystems. From medicinal plants to phenological observations, these practices emphasize the reciprocal relationships that sustain biodiversity, soil health, and community well-being. Biomimicry offers a powerful framework for implementing these principles, aligning agricultural practices with natural cycles and ecosystem functions. Moving forward, fostering partnerships, addressing systemic barriers, and expanding educational opportunities are critical for scaling out and rooting down ethnoecological practices in regenerative farming. By doing so, farming communities can build resilient systems that honour cultural diversity, ecological integrity, and the interconnectedness of all life.

Cultural-Spiritual Relations

Cultural and spiritual dimensions are deeply intertwined with regenerative farming practices, shaping how communities interact with the land, food, and one another. These relationships extend beyond production, embedding farming within a larger framework of respect, celebration, and reciprocity. This section explores the role of sacred relationships, cultural celebrations, and

community well-being in fostering sustainable practices while highlighting the importance of intercultural understanding in creating inclusive, resilient food systems.

My research collaborators consistently viewed land and food as living entities deserving respect and care. These sacred relationships often found expression in practices that honoured the interconnectedness of life. For example, teachings from Indigenous members of the community emphasized the spiritual significance of offering gratitude to the land, animals, and plants through traditional ceremonies. Such practices align with the regenerative farming principles of working in harmony with natural systems and fostering reciprocal relationships with the earth. Farmers and activists also shared a spiritual connection to their work, viewing it as a means to nurture not only the land but also their communities. Richmond's efforts to reforest riparian ecosystems and diversify pastures at Regenera Ranch reflect a commitment to healing the land's ecological wounds while creating a legacy of abundance for future generations. For Sarah and Marcus Riedner of Happiness by the Acre, their faith moves them to a stewardship ethic, and to care for the gifts of land and life they have taken responsibility for. Likewise, Jerremie and Rita Clyde of Little Loaves Farm understand agriculture as an act of faith. In a 2018 interview with *The Albertan* and an earlier column on *Kolbe Times*[78], Jerremie explains:

> "We named our farm 'Loaves' as a nod to the New Testament miracle of the loaves and fishes—because, honestly, if we produce any food at all, it will be a miracle. But beyond that, farming for us is a faith calling. Our approach is rooted in the biblical concept of 'shalam' (שָׁלַם) which goes deeper than just 'peace'—it's about the flourishing of all life. That's why we farm the way we do—chemical-free, with diverse crops and livestock, using small equipment like foot tractors and horses. It's all done with the goal of increasing biodiversity, creating a space where life can thrive."
>
> Jerremie recalled a moment that shaped their farm's mission: "One day, while cutting rye with a scythe, I stopped to sharpen my blade and suddenly heard a gentle thrum—like a relaxed hive of bees. I looked down and saw the clover at my feet alive with them, drinking deeply from blossoms that had been hidden

[78] https://www.thealbertan.com/local-news/farming-faith-1818786 ; https://www.kolbetimes.com/little-loaves-farm/

> beneath the tall rye just moments before. It was as though, in harvesting, we had set the table for the bees. That moment, and so many like it, made me realize just how expansive the Gospel is. It showed us that the farm, depending on the practices we employ, can bless more than just the people it feeds."
>
> "The ways we cultivate the land are moral questions, matters of faith, and opportunities to extend grace and promote justice," he goes on. "With this in mind, we describe our farm as 'faith-based'—our mission field is the land itself. Every decision—what we plant, how we care for animals, what tools we use—flows from that calling. God has put so many great people in our lives to help us, from humane animal handling to dugout design. You simply can't have a healthy, vibrant farm without community. If eating is missional, then engaging with local farmers, supporting them, and even working alongside them is as central to faith as evangelism. Like the bees and the rye, when we live out that intention, we discover a host of blessings—grace extended through food, labour, and community."

Each of my research sites contributes uniquely to the cultural-spiritual fabric of regenerative farming. Each site embodies unique expressions of sacred relationships, cultural celebrations, and intercultural understanding shaped by its context, participant demographics, and scale of operation (Table 14). For a not-for-profit peri-urban farm, education, healing, and urban-rural connections were emphasized, fostering a collective sense of stewardship. An urban farm business focused on sustainability and cultural celebration within an urban context, promoting mindfulness and community connection. The Activist Collective for the Commons centered on justice-oriented, cross-cultural collaboration, creating a dynamic space for intercultural understanding and shared practices. Finally, a network of rural producers rooted in multigenerational traditions celebrated continuity while incorporating new perspectives through apprenticeships and exchanges. By integrating cultural and spiritual dimensions into their practices, these regenerative farms collectively demonstrate how relational foodways can honour diverse traditions, promote intercultural dialogue, and nurture a sense of shared humanity and connection to the land.

	Sacred Relationships	Cultural Celebrations	Intercultural Understanding
Not-for-Profit Peri-Urban Farm	• emphasizes respect for ecological cycles and community stewardship • participants view the land as a shared space for healing and education • fosters connections between urban dwellers and the land • serves as an entry point for individuals unfamiliar with farming practices	• seasonal events (harvest festivals, planting days) bring together volunteers and community members from diverse cultural backgrounds • gatherings include shared meals that highlight local ingredients and traditional recipes • reinforces a collective appreciation for food as a cultural bridge	• prioritizes knowledge exchanges between urban and rural participants, many of whom come from immigrant communities • workshops on food preservation provide opportunities for participants to share practices from their heritages
Urban Farm Business	• framed through the lens of sustainability and personal well-being • operators and customers view the farm as a sanctuary within the city • emphasize the importance of reconnecting with nature and cultivating mindfulness through food production	• participates in events where chefs and community members collaborate to showcase dishes rooted in local and global culinary traditions • celebrates cultural diversity while highlighting the farm's role in sustainable urban food systems	• hub for diverse communities to connect through food • customer interactions at markets or CSA pickups allow for informal exchanges of recipes and traditions • fosters mutual appreciation and intercultural dialogue, however it's more transactional compared to the deeper, collective engagement seen in the other sites
Activist Collective for the Commons	• views the land as a shared resource deserving collective care and reverence • rooted in the intersection of environmental and social justice • emphasis on dismantling extractive systems and nurturing reciprocal relationships with the land	• gatherings such as potlucks, sharing circles, and workshops celebrate the cultural heritages of collective members • events may include rituals and ceremonies, such as offering gratitude to the land or learning Indigenous practices and Protocols • deepens participants' spiritual connection to their work	• intercultural exchange is a central focus • members create spaces for cross-cultural dialogue • commitment to inclusivity and solidarity • multilingual space
Rural Producer Networks	• deep respect for the land's capacity to sustain life • sacred relationships expressed through daily practices of care (nurturing biodiversity, restoring riparian ecosystems)	• embedded in seasonal cycles • events (shearing, harvest feasts, barn raisings) serve as opportunities to honour collective efforts • feature local food traditions passed down through	• while rural networks tend to be less diverse than urban sites, they still provide spaces for intercultural exchange (farm apprentices, foreign workers, international study exchanges, Indigenous relations)

	• multigenerational connections to the land, viewing it as both a livelihood and a legacy	generations, reinforcing cultural continuity	• new perspectives and practices enrich community's understanding of global agricultural traditions

Table 14: Cultural-Spiritual Relations Across Field Sites

Intercultural Understanding

From the soil to the plate, food serves as a bridge between cultures, providing a tangible way to share traditions and foster community connections. Participants in the GFL Activist Collective brought their heritages to life through shared meals, introducing one another to traditional dishes such as Sara and Oscar's infamous *Pastel de Choclo* from Chile and Gertrude Korkor Samar's Ghanaian dish, *3to*. Indigenous foodways of Wild Rose Country deepened the Collective's appreciation for local ingredients and historical food preservation techniques. For instance, Shantel Tallow of Kainai First Nation prepared pemmican–a mixture of saskatoon berries, dried meat, and tallow (Foster, 2015)–which we devoured alongside other recipes from her catering company, Aahksoyo'p Indigenous Comfort Food[79] (Figure Set 30). Penny from Siksika made us her infamous chokecherry syrup, which we poured over warm bannock.

[79] https://www.facebook.com/aahksoyopcatering/

Figure Set 30: Shantel Tallow (*left*) cooking from her Aahksoyo'p Nootski Cookbook (*right*)

These gatherings encouraged the exchange of practical skills, such as pickling, jamming, and smoking, which reinforced community well-being and food security. Preserving the harvest ensured that the bounty of Wild Rose Country could nourish participants year-round while fostering intergenerational knowledge-sharing. By combining cultural celebration with practical skill-building, these practices nurtured a sense of collective health and sustainability. In these spaces, intercultural dialogue emerged as a powerful theme, demonstrating how shared practices and stories can bridge cultural divides. Farm exchanges, potlucks, and workshops facilitated moments of connection between diverse cultural groups. During a workshop at the Land of Dreams, Cree and Yazidi participants discovered parallels in their creation stories; "we're cousins!" they exclaimed. Similarly, a Cameroonian woman found commonality in the patterns of a jingle dancer's dress and her footwork, reflecting shared artistic and cultural expressions.

These interactions fostered mutual respect and a sense of relationality, reminding participants of their shared humanity.

The literature on intercultural exchange underscores the value of such dialogues in promoting inclusive agricultural practices (FAO, 2005; PiLAF, 2024). Dána-Ain Davis and Christa Craven (2016) highlight the importance of centering marginalized voices, including those of Indigenous, Black, immigrant, and gender-diverse growers, to dismantle dominant systems of patriarchy and capitalism. By creating spaces for knowledge-sharing across cultures, regenerative farming can challenge exclusionary practices and build more equitable food systems. My findings highlight the profound cultural and spiritual dimensions of regenerative farming. Viewing land and food as living entities inspires practices rooted in care, reciprocity, and sustainability. Shared meals, rituals, and skill exchanges strengthen community bonds and promote food sovereignty. Moments of connection across cultures and generations foster mutual respect and inclusivity in agricultural practices. Collective knowledge and traditions support health, resilience, and sustainability in farming communities. These insights emphasize the transformative potential of relational foodways to unite diverse cultural and spiritual practices in service of ecological and social sustainability. The next chapter explores how these findings contribute to broader frameworks for social change, demonstrating the significance of cultural-spiritual relations in building resilient and inclusive food systems.

Chapter 9: Discussion of Findings

This chapter further explores my research findings, situating them within broader theoretical frameworks to discuss the dynamics of community organizing as a catalyst for food system transformation. Through the lens of relational foodways and community resilience observed during the research, I connect my findings with broader debates on growing social 'capital' (Putnam, 2000). In doing so, I discuss what binds people together and what creates rifts. By reflecting on these insights, this discussion advances a deeper understanding of how cooperation and reciprocity can be theorized and leveraged to sustain the momentum needed for food system transformation.

Cooperation and Community Organizing

Community organizing is more than a strategy; it is a process of collective action that harnesses cooperation, reciprocity, and relationship-building to address shared grievances and effect meaningful transformation. While its success depends on various factors—such as socioeconomic conditions, identity, common goals, and opposition to a perceived adversary—its pathways and pitfalls reveal critical insights into the mechanisms that drive social cohesion and food systems change. Building on lessons from my case studies, I reflect on the struggles and successes of different groups to contribute to the growing body of literature on social movements, resistance dynamics, and cooperation. It highlights how communities develop strong interpersonal ties, mutual trust, and shared values that enable collective action, and theorizes the processes that enable people to come together or, conversely, divide them. Understanding the pathways that lead to successful community organizing—as well as the pitfalls and political landscapes that shape it—provides insights into the conditions under which people organize effectively.

Social movement theory underscores how communities mobilize resources and common goals to drive transformative change. Social movements are key sites for generating and sharing knowledge that challenges hegemonic systems of power. The work of María Isabel Casas-Cortés, Michal Osterweil, Dana E. Powell (2008) emphasizes the interdisciplinary nature of social movements, where cultural narratives and framing processes become tools for collective action. Their concept of "knowledge-practices" aligns with the relational nature of foodways, where the lived experiences of farmers, organizers, and communities generate place-based strategies to resist global capitalist systems. This place-based knowledge offers a counterpoint to top-down, academic-scientific approaches, fostering more participatory and egalitarian forms of engagement. Aziz Choudry and Dip Kapoor (2010) theorize the knowledge-production dimensions of movement activism; as communities organize around food justice and sustainable agriculture, they engage in continuous processes of learning and adaptation. This involves not only technical knowledge—such as regenerative farming practices—but also political education and organizational strategies that challenge existing power dynamics. For instance, small-scale farmers often educate one another on how to navigate local markets or resist exploitative corporate practices, building a collective repository of knowledge that strengthens their movements. However, as these authors caution, the voices and perspectives of grassroots movements are frequently marginalized or overwritten by dominant narratives from NGOs, academic institutions, or other external actors. To counter this, it is essential to centre the voices of those directly involved in foodways, ensuring that their lived experiences inform both scholarly research and broader social change efforts.

In Arturo Escobar's (1992) work on post-development, he highlights the importance of daily life and cultural practices in understanding social movements. Relational foodways, as a

site of solidarity and socio-economic transformation, exemplify how identity-centered paradigms shape collective action. In regions where small-scale farming remains a primary livelihood, the identities of farmers are deeply intertwined with their resistance to capitalist exploitation and environmental degradation. Communities innovate ways to sustain their practices despite limited access to resources, such as seed-saving networks or permaculture techniques. Additionally, farmers collaborate across class, race, and gender lines to create cooperative models that prioritize communal well-being over individual profit. Escobar's critical reflection on State politics is also crucial. State policies often marginalize small-scale farmers, promoting industrial agriculture and commodification. By building movements rooted in cultural innovation and place-based knowledge, communities challenge these hegemonic systems while asserting alternative pathways to development.

Allison Hayes-Conroy and colleagues (2020) introduce the concept of "nonmovement" work, which involves leveraging cultural and creative activities to achieve political goals without overtly politicizing the work. This approach is particularly useful in contexts where direct confrontation with power structures may lead to repression or marginalization. In relational foodways, nonmovement strategies include hosting food festivals or farm tours that celebrate local traditions while subtly advocating for food justice; using joy, care, and community connection as tools to mobilize marginalized groups, fostering a sense of belonging and empowerment; and establishing cooperatives that strengthen community bonds and economic resilience without explicitly framing them as acts of resistance. In my case studies, reciprocity and relationship-building provided an alternative to the transactional relationships that dominate capitalist food systems. Reciprocity was evident in practices such as seed-sharing, cooperative labour exchanges, land-sharing, and collective decision-making processes. Such practices

exemplify how communities can co-create solutions without relying solely on financial capital. For instance, in Mountain View Growers, cooperative members regularly convened to discuss challenges and share knowledge about regenerative farming techniques.

The cooperative model has emerged as a particularly potent mechanism for community organizing. Jennifer Sumner and colleagues (2014) define cooperatives as autonomous associations of persons united voluntarily to meet common economic, social, and cultural needs through jointly owned and democratically controlled enterprises. This foundational principle aligns with the ethos of relational foodways, where trust, reciprocity, and mutual support are critical. By fostering direct relationships between producers and consumers, food cooperatives embody new forms of political association and market governance, redistributing value across the network and challenging the extractive practices of conventional food systems.

Cooperatives in food systems can take various forms, each tailored to specific needs and goals. In producer cooperatives (e.g., Mountain View Growers, Innisfail Growers), farmers collaborate to share resources, such as machinery or land, and improve collective bargaining power. Michael Gertler (2007) highlights group-farming arrangements and machinery co-ops as examples of how producers can specialize individually while sharing labour during critical periods, such as planting or harvesting. Food worker cooperatives collectively own and manage enterprises, ensuring democratic decision-making and equitable distribution of profits. In consumer cooperatives or solidarity purchasing groups (Grasseni, 2018), consumers unite to secure access to high-quality food while supporting ethical production practices. These cooperatives reintroduce trust into food systems by fostering direct relationships with producers. Finally, multi-stakeholder cooperatives bridge producers, consumers, and workers, creating inclusive governance structures that reflect diverse interests within the food system. Each model

contributes to AFNs that challenge dominant industrial paradigms, creating spaces for innovation and collaboration.

Key benefits of cooperatives include cultural and ecological stewardship, fair trade practices, and alliance-building. Celebrating food, culture, and community, cooperatives often prioritize regenerative farming practices that build soil health, conserve water, and reduce energy use. By prioritizing fairness and transparency, cooperatives promote equitable economic practices, ensuring that farmers and workers receive a greater share of the value they create. Direct relationships between stakeholders restore trust eroded by industrial food systems. Finally, cooperatives strengthen horizontal linkages within and across communities, creating networks of solidarity that enhance resilience. By keeping resources and decision-making local, cooperatives enhance the capacity of communities to withstand economic and environmental shocks. For example, the intention of YYC Growers and Distributors was to facilitate collaboration between small-scale farmers and urban consumers, ensuring fair trade while promoting sustainable farming practices. Before this initiative went under, it provided economic stability for producers and educated consumers about the importance of supporting regional, regenerative agriculture. This example demonstrates the pitfalls and politics of cooperatives, which are contingent upon overcoming internal divisions and navigating external economic pressures.

Further challenges include the time-consuming and contentious nature of achieving consensus in democratic governance; the equitable rotation of managerial responsibilities and maintenance of accountability; and the navigation of differences in socio-economic status, gender, class, race, cultural backgrounds, and access to resources to ensure all members feel valued, included, and benefit from collective initiatives. Small-scale farmers, while sharing common struggles, are not a homogenous group. Farmers with greater access to capital and

technology may align with market-driven approaches, while immigrant or Indigenous farmers may prioritize decommodification and subsistence farming. These alignments, in turn, reflect broader processes of resistance and adaptation within capitalist systems. As Bernstein (2010) argues, the incorporation of small-scale farmers into capitalist relations often leads to fragmented livelihoods, where traditional practices coexist with market-driven imperatives. Thus, social differentiation necessitates conscientious engagement with identity politics to understand these differences and design inclusive, effective organizing strategies.

The critiques raised by Madeleine Fairbairn (2012) and Marit Rosol (2020) offer valuable perspectives on the limitations and potential of cooperatives and AFNs in advancing systemic change within food systems. These insights challenge us to critically assess the roles of cooperatives and AFNs, questioning whether they truly disrupt existing power structures or merely provide alternatives within the dominant capitalist paradigm. As Fairbairn highlights, the focus on supporting family farmers often renders the contributions and struggles of farmworkers invisible. This oversight perpetuates inequalities within alternative food systems, mirroring those of conventional agriculture. Localization efforts with a focus on ethical consumption, while fostering direct relationships and community resilience, can also entrench existing socio-economic hierarchies or exclude marginalized groups. Initiatives that depend on niche markets or premium pricing may inadvertently reinforce class-based inequalities and fail to scale their impact. Fairbairn's critique of the depoliticization of food politics raises important questions about the capacity of AFNs to effect systemic change. By placing the burden of reform on consumers, entrepreneurs, and volunteers, AFNs risk absolving governments and corporations of their responsibility to address structural inequalities. This approach inadvertently aligns with

neoliberal ideologies, which emphasize individual responsibility rather than collective action or systemic reform.

Creating a "more heterodox agri-food paradigm," as Rosol (2020) suggests, involves rethinking the fundamental principles and practices that govern food systems. Addressing the root causes of inequality and exploitation in food systems requires a shift from localized solutions to broader, systemic interventions that challenge the structures of global capitalism. To move beyond a niche economy, AFNs must actively engage in political advocacy, challenging policies that perpetuate inequities and demanding accountability from State and corporate actors. For example, cooperatives can form alliances with labour unions and advocacy groups to amplify the voices of farmworkers and other marginalized stakeholders. This includes advocating for policies that ensure fair wages, affordable access to healthy food, and protections against discrimination, as well as land reform, anti-monopoly regulations, and investments in sustainable agriculture.

In Wild Rose Country, CSA models have adopted sliding-scale shares, enabling low-income households to access fresh produce. Farmer-led markets that facilitate direct producer-consumer relationships have bypassed intermediaries to retain greater value within local circular economies. While pushing back on capitalist enclosures, the Activist Collective and not-for-profit peri-urban farm reimagined spaces of relationality by "storying the land"[80] and practicing reflexivity to help make sense of the world (Ballantyne, 2014; Marin & Bang, 2018). As Casas-Cortés et al. (2008) argue, the very acts of asking questions and being reflexive are transformative in themselves. Researchers engaging with relational foodways must adopt a relation-symmetrical approach, fostering cooperative, non-authoritarian relationships with

[80] To Ananda Marin and Megan Bang (2018), walking, reading, and storying the land are important intergenerational cultural practices, embedded in Indigenous Ways of Knowing, that build knowledge about the natural world and one's place in it.

community members. This involves moving beyond conventional academic roles to actively collaborate with communities, co-creating knowledge and solutions, recognizing and integrating the silences and misrepresentations that may exist in dominant accounts of food systems, and reimagining democratic engagement as a relational practice grounded in mutual respect and shared purpose. By shifting the mode of engagement, researchers can contribute to the transformative potential of social movements, amplifying their collective voices and supporting their struggles.

From my research, the experiences of cooperation and community organizing in relational foodways offer several key lessons: 1) Successful organizing requires navigating the complexities of identity politics while building broad-based coalitions that transcend social and economic divides; 2) Movements rooted in local practices and reciprocity are better equipped to resist global capitalist pressures and assert alternative visions of food systems, but must be positioned within broader networks of solidarity and be supported institutionally; 3) Nonmovement work demonstrates how cultural innovation can sustain political action, even in the face of repression or marginalization; and 4) Scholars must approach their work with humility and openness, recognizing the value of grassroots knowledge and prioritizing co-creation over extraction. Relational foodways are a rich site for exploring the transformative potential of cooperation, social movements, and community organizing. By drawing on meaningful connections, resisting commodification, and navigating the complexities of social differentiation, communities can create more equitable and sustainable food systems. While not an easy, quick "magic bullet," these efforts offer a powerful framework for social change that prioritizes collective well-being over individual gain. In reflecting on these lessons, it is evident that the future of food system transformation depends on our ability to foster inclusive, resilient,

and innovative approaches to community organizing. Through continued dialogue, imagination, and solidarity, we can build pathways toward a food system that truly reflects the values of equity and sustainability.

Food System Transformation

My research illuminates the complexities and dynamics of food system transformation in Alberta, Canada, underscoring both the challenges and opportunities of regenerative farming and relational foodways as pathways toward structural change. Here, I reflect on the implications of my findings for conceptualizing transformation, focusing on the themes of power dynamics, technological advancements, and relationality. My findings resonate with broader conversations in the literature on food system transformation, particularly the frameworks articulated by Harris et al. (2019) and IPES-Food (2021). In a scoping review of the academic literature on food systems change, scholars Silvana Juri, Naomi Terry and Laura M. Pereira (2024) define food system transformation as:

> "significant reconfigurations of the assemblage of food system activities, actors, outcomes, and relationships (dynamics) to move away from the current globalized industrial model and ensure sustainable, resilient, and just models of production and consumption. These transformative processes demand the collective and inclusive redesigning (from re-imagining to re-governing) of food system components through platforms where governance, practices, power, and value-change can be debated and enacted at multiple scales. Food system re-design should therefore be seen as an ethico-political process that needs to be collectively stewarded and nurtured in an adaptive, engaged, and creative way. This also means that strategies (pathways) and tools need to respond to and resonate with current contextual needs and features, while also being future-proof and proactive (anticipatory)." (p. 12).

Food system transformation reveals itself as a contested and iterative process involving structural changes and reconfigurations. Structural change refers to a redistribution of power, resources, and opportunities to enable equitable participation and sustainable practices. Reconfiguration, by contrast, involves the reorganization of existing systems to adapt to

emerging challenges and opportunities without necessarily dismantling underlying power structures. In Wild Rose Country, the regenerative farming alliances I work with are navigating both dimensions. By prioritizing ecological stewardship, these alliances push against extractive agricultural practices and envision an agrarian future grounded in relationality and sustainability. Yet, as highlighted in the 2021 unifying framework by IPES-Food, the International Federation of Organic Agriculture Movements (IFOAM)-Organics International, Agroecology Europe, FiBL (German: Forschungsinstitut für biologischen Landbau; The Research Institute of Organic Agriculture) Europe, and Regeneration International, achieving food system transformation requires addressing the political economy of food, particularly the concentration of power in agro-industrial systems.

My findings echo this imperative. Regenerative farming practices—while innovative and inspiring—must contend with systemic barriers such as land tenure insecurity, market pressures, and policy frameworks that favour large-scale monoculture operations. The persistence of these barriers underscores the need for transformation to include not just ecological shifts but also systemic changes in governance, policy, and power redistribution. Access to and control over natural resources, such as land and water, remain critical arenas of power contestation in food systems. This research reveals that regenerative farmers and foodway practitioners in Canada experience varied access to these resources, often shaped by historical inequities and contemporary market pressures. Small-scale, immigrant, and Indigenous growers face disproportionate challenges in securing land and financing for sustainable practices. These inequities perpetuate social hierarchies and hinder efforts to build more inclusive food systems. My findings also highlight the potential of regenerative farming to redistribute power. By fostering alliances among farmers, Indigenous communities, and local food advocates, these

practices create opportunities for collective bargaining and knowledge sharing. Such alliances challenge the hegemony of agro-industrial models by demonstrating the viability of alternative food systems rooted in ecological and social justice. This aligns with the literature on post-development and alternative visions of development, which advocate for bottom-up approaches that empower marginalized communities to redefine the meaning of progress (Juri et al., 2024).

Relational foodways—emphasizing reciprocity, community, and ecological interdependence—offer a promising framework for addressing social inequalities and advancing transformation. My findings reveal that relational foodways in Wild Rose Country challenge existing power structures by prioritizing human and ecological relationships over market-driven imperatives. These practices embody principles of food sovereignty, emphasizing local control over food systems and equitable access to resources. However, relational foodways also face pitfalls. Scaling and scoping these practices to influence broader food systems requires navigating tensions between localism and broader structural constraints. For instance, while relational foodways celebrate diversity and localized knowledge, they must contend with market demands, regulatory frameworks, and the need for technological integration. As my findings illustrate, many small-scale farmers employ a hybrid approach, blending generational practices with modern technologies such as solar-powered infrastructure and automated watering systems. This reflects a pragmatic response to the challenges of scalability and resilience.

The adoption of technology in Canadian agriculture, as documented in my research, reflects broader trends of modernization and innovation. From renewable energy production to precision farming tools, technology offers pathways for increasing efficiency and reducing environmental impacts. The number of farms harnessing renewable energy production has only

increased, with over 22,500 operators reporting its use in 2021 (Statistics Canada, 2022a). Tilling implements, such as air seeders, have been improved to retain previous residue and its nutrients, while minimizing soil disturbance and erosion (Hamre & Asselstine, 2015). In the most recent Agricultural Census, 21.5% of farmland in Alberta was prepared for seeding using tillage that retains most of the crop residue on the surface; 21.5% of farms incorporated most of the crop residue into the soil; and 28.6% reported baling crop residue (Statistics Canada, 2022a). Swathers and balers are continually redesigned to improve drying, curing, and storing harvested forage materials. Other advances include treated seeds, silage grinder mixers, bulk feed hopper tanks, compressor coolers for storage, automated watering systems, and more. Across my case study sites, I also observed the installation of appropriate, sustainable technologies such as rainwater catchment systems, underground cold storage, sun driers, passive solar greenhouses, and solar-powered barn doors.

In addition to advances in agricultural implements and energy sources, the growth of information and communication technology (ICT) has enabled faster, more accessible ways of exchanging and operationalizing technical knowledge. These technologies enable farmers to exchange ideas, access expert advice, and adapt practices in real-time, fostering resilience in the face of climate change and market volatility. A few examples come to mind from a storytelling session with the Winter family. Until Corinne and Darrel Winter expanded their quota in 1995, they had never visited another turkey farm, despite having been raising birds for 20 years. When designing their brooder barn, they relied on the design of the first barn Darrel's father built. The only additional guidance they received came from a supplier who casually remarked, "This is how some people build a barn." Beyond that, their process was largely one of trial and error. Initially, they installed a 4-foot plywood door to allow the birds outdoor access. However, as is

common on the prairies, the weather often turned unexpectedly. “Once, a hailstorm hit, and the turkeys were scrambling to get back inside. We managed to save them, but it was close—they can get hypothermia in no time,” Darrel recounted. Darrel also recalled challenges in setting up water lines in their 200-foot grower barn:

> “At first, I installed winches and cables at one end of the barn to hoist up 50 waterers, but it was extremely difficult to manage from a single point. In 1995, when we bought a feeder system from another producer, we noticed he had winches placed in the middle of his barn. By pulling from both sides, the system worked more efficiently, with no strain on the winch. From then on, I always installed winches in the middle!”

Another example of innovation came when Darrel installed ceiling fans to circulate air vertically. During a webinar, experts discussed the benefits of moving air horizontally. Darrel was able to contact the professor presenting the session, who provided him with a detailed design for a horizontal air circulation system. Reflecting on how much knowledge sharing has improved with internet and video call technology, Darrel noted, “Before these advancements, you just hoped that the nearest poultry farmer, feed supplier, or district agriculturalist might have the answers you needed.” The integration of ICT in agriculture—evident in the experiences of my collaborators—demonstrates the transformative potential of digital knowledge-sharing networks. Yet, these benefits must be equitably distributed to ensure that all farmers, regardless of scale or location, can participate in and benefit from technological advancements. Likewise, the widespread adoption of technology in Canadian agriculture raises critical questions about equity and power. Large-scale operations often have greater access to capital-intensive technologies, perpetuating disparities between small and industrial-scale farms. At cautioned by the NFU (2015):

> “Farmland is not only lost due to sprawl, but also by farming methods that weaken the productive capacity of soils. It has become necessary for the farmer to increase yields in the short-term in order to cover increasing production costs and to minimize the effects of the cost-price squeeze on the operation. Excess

> financial pressure due to debt or excessive rents forces the land to provide an income stream beyond the soil's sustainable capacity."

The pathways, pitfalls, and politics of food system transformation in Southern Alberta highlight the need for holistic approaches that address ecological, social, and economic dimensions. Regenerative farming and relational foodways offer compelling visions for a more just and sustainable food system, but their success depends on dismantling systemic barriers and fostering inclusive alliances. Transformation, as my research suggests, is not a linear process but a dynamic interplay of resistance, adaptation, and innovation. By centering the voices and practices of those engaged in regenerative farming and relational foodways, we can envision a food system that values equity, sustainability, and community well-being. It is also crucial that the process of regenerating relational foodways is in conversation with global forms of grassroots resistance while caring for the socio-ecological soils in which we live. These efforts are not only about building alternatives but also about nurturing the conditions for ongoing resistance and renewal.

Forms of Resistance and Renewal

Through experiential farming, farm exchanges, group sharing circles, and storytelling, my research collaborators shed light on their enactment of, and prefigurative visions for, political resistance and ethnoecological renewals of relational foodways. This section speaks to the political and material interests of small-scale regenerative farmers in Wild Rose Country by discussing the relational pathways that emerged in my research. These include relationships with community, resources, policy, and praxis. Akin to a mycorrhizal network that connects fungal hyphae with the roots of individual plants, these pathways must be understood as interconnected and in relationship with one another.

Relationships with Community and Resources

Whether a farmer is a first-generation grower or descends from a lineage of agriculturalists, one of the most powerful forms of resistance and renewal for small-scale regenerative farmers in Wild Rose Country lies in cultivating robust relationships with their ethnoecological communities. These relationships intertwine socio-economic, ecological, and political dimensions, offering a foundation for grassroots empowerment and a counterpoint to industrialized agriculture. In this research, such relationships have occurred informally (i.e., waiting for the right time or people to converge and kindle a spark) or formally (i.e., networking at a conference with the intention to mobilize action). My findings highlight how collaborative networks, shared values, and community-driven initiatives support small-scale farmers in navigating challenges and pursuing sustainability.

The stories of Alex and Heather illustrate the importance of community networks in fostering skills, confidence, and access to resources. Alex underscores the value of organizations such as YA, Organic Alberta, and the NFU, which provide platforms for acquiring production techniques, navigating cash flow, and connecting with mentors. The YAA Program particularly exemplifies the value of hands-on, seasonal learning; embedding new growers in the rhythms of farm life and instilling a sense of belonging in rural spaces. Heather's collaborative approach at Highfield showcases how partnerships can amplify impact. By working with on-site (e.g., Basil Ranch, Common Digs, ABC Bees) and off-site grower-members (e.g., Calgary Horticultural Society, Permaculture Calgary Guild), interns, and community organizations, Heather's team activated a diverse range of knowledge-sharing opportunities and resource exchanges. Similarly, in her current role at the UCalgary Campus Food Hub, she collaborates with the Students Union Food Bank, Food Justice Now student club, and Centre for Career and Personal Development to

affect change. These participant-driven models strengthen the capacity of both the urban farm and food hub to address food access across economic strata while fostering collective resilience. These findings align with social movement theories that emphasize grassroots mobilization as a pathway to both empowerment and systemic change (Davies, 2024; Raj et al., 2022).

Grassroots mobilization and resistance movements play a pivotal role in advocating for equitable, sustainable, and resilient food systems. These movements often emerge as a response to systemic injustices within global and local food economies, including industrial agriculture, land dispossession, environmental degradation, and corporate control of food production and distribution. By prioritizing community-led initiatives, grassroots mobilization fosters a participatory approach to reimagining food systems that are both sustainable and inclusive. Drawing heavily on concepts of food sovereignty, agroecology, and community resilience, grassroots mobilization in food systems integrates long-held knowledge systems with ecological principles to advocate for farming methods that regenerate natural systems while empowering communities. Likewise, resistance movements aim to dismantle corporate monopolies over seeds, agricultural land, and water, challenging the commodification of essential resources. From La Vía Campesina and India's Navdanya, to Mexico's Zapatistas and U.S.-based Mo' Better Foods, these movements of resistance address the structural inequities perpetuated by neoliberal globalization (Alkon, 2007; Ejército Zapatista de Liberación Nacional [ENLACE], 2005; Nyéléni, 2007; Shiva et al., 2017). Despite corporate hegemony, inequitable government policies, and resource constraints, these movements employ diverse tactics to achieve their goals, including direct action, policy advocacy, community organizing, political education, and capacity-building.

In Wild Rose Country, establishing and maintaining enduring relationships within farming networks requires significant time and intentional effort. My research collaborators observed that successful partnerships emerge from shared values and trust-building over time. However, they also noted barriers such as burnout, limited capacity, and logistical challenges. The physical design of farming spaces can hinder opportunities for rejuvenation and connection. For instance, the small downtown SPIN plot does not have any seating for labourers to take a rest and converse. On the other hand, Land of Dreams is so vast that it requires more work spread out over more land. Growers either have to work in groups of close proximity or intentionally carve out time to reconnect for lunch or water breaks.

The concept of intersectional "deep care" as both an ethic and practice of care offers a valuable lens through which to understand the experiences of the farming community in this research. Drawing on Pallavi Banerjee, Chetna Khandelwal, and Megha Sanyal's (2024) theorization of deep care within marginal feminist organizing in India, we can extend this framework to agricultural labour, where care emerges as a critical but often invisible force sustaining both people and the land. Deep care, as they define it, goes beyond immediate acts of caregiving to encompass long-term relational, material, and affective investments in the well-being of communities and ecologies. This framework is particularly salient when considering the experiences of farmers who must balance the demands of democratic organization with the relentless economic pressures of agricultural production.

Rod, one of the project leads at Land of Dreams, highlights this central contradiction: the time-intensive nature of democratic organizing and the inescapable, laborious cycles of farming. This tension underscores the need for a regenerative model of agricultural labour—one that not only sustains the land but also prioritizes human well-being. Within this framework, deep care

manifests in the everyday acts of mutual aid, knowledge-sharing, and collective decision-making that sustain both livelihoods and community solidarity. However, these practices are often strained by the structural constraints of economic precarity, gendered divisions of labour, and environmental degradation. Rod shares:

> "What often happens is the humans who are trying to establish a regenerative system on the land are not being regenerated in the process. I have been sick for the last month and know it's my body's way of telling me to prioritize my health. There is a real need for a way in the world that is not so damaging and draining to humans; that is softer and more interconnected. We aren't there quite yet, but something among soil farmers has turned on. There's a sense of awe and wonder of our relationship to the earth. A lot of our disembodiment is our disconnect with Nature."

Applying an intersectional perspective to deep care in the context of farming communities reveals how multiple axes of oppression—such as gender, race, and class—shape who performs care work and how that labour is valued (or devalued). Women farmers, in particular, bear the brunt of reproductive and subsistence labour, engaging in unpaid or underpaid tasks essential to household and community survival. Their work, though foundational, remains peripheral in dominant economic models that prioritize production over well-being. To foster a truly regenerative agricultural system, it is crucial to integrate deep care into farming practices in ways that acknowledge and alleviate these tensions. This includes advocating for policies that support collective land stewardship, fair compensation for all forms of labour, and institutional structures that recognize the interdependence of ecological and human health. By embedding deep care as a guiding ethic in agricultural communities, we move beyond survival-oriented frameworks to cultivate spaces where care itself becomes a transformative and sustaining force.

These challenges echo broader dynamics within social movements. Theories of resistance[81] suggest that enduring success often depends on cultivating spaces for reflection,

[81] For an overview of resistance discourse over time, see Lilja (2022).

solidarity, and celebration—practices that counterbalance the pressures of activism or labour. Participants also voiced concerns about the persistence of "echo chambers" in regenerative farming communities, where the same voices dominate conversations. Expanding the inclusivity and diversity of these networks will be crucial for sustaining momentum. The findings also reveal tensions and divides within the broader regenerative farming movement, particularly along political and social lines[82]. While rural communities–especially in Alberta–often lean toward conservative ideologies, the ethos of regenerative farming intersects with progressive values such as environmental stewardship, community resilience, and equity. These contradictions suggest a complex landscape of motivations. For some, participation is driven by identity, a sense of purpose, or resistance to industrial agriculture. For others, practical concerns such as economic viability and land access dominate.

Case studies from Wild Rose Country, such as the pluriactivity at HBTA and Regenera Ranch, offer insights into how local hubs might bridge divides by fostering knowledge-sharing across diverse groups. In Linden, The Farm Team[83] is composed of four permaculturists who purchased fifteen acres to farm collectively. Since my YAA with RRUF, Michael has expanded his operation to outside the city with the help of land-sharing groups on social media. On another parcel of land, two former YA Apprentices leased a 1-acre plot within a cooperative managed by eight individuals, each overseeing their own plot for distinct operations. Their vision includes transforming the existing hay field into a market garden, raising egg-laying hens, cultivating mushrooms outdoors, producing vermicompost castings, and farming insects as poultry feed. To foster collaboration and maintain open communication, they meet with the other cooperative members at least once a month to exchange ideas and explore opportunities for joint initiatives.

[82] See recent political news stories: Sustainable Ag Strategy; CCA Withdraws; Political Change
[83] About Us – The Farm Team

Access to land remains a critical barrier for many aspiring farmers in Wild Rose Country. The financialization of farmland and rising land prices create significant obstacles, forcing growers to navigate creative solutions such as land-sharing agreements or cooperative ownership models. Participants like Michael and the YA alumni cooperative illustrate how social media and community networks can facilitate these arrangements. These initiatives underscore the potential of relational foodways to thrive at the local level through cohesive community organization and shared resources. However, the commodification of land also raises questions about the ethical and practical dimensions of land ownership. Who owns the land? What kind of relationship do or should they have with *it*? Who benefits financially? These questions highlight the need for policies that prioritize equitable land access and support sustainable practices, enabling small-scale farmers to build lasting relationships with the land.

A recurring theme in my findings is the challenge of balancing regenerative farming practices with the well-being of farmers themselves. Participants described the physical and emotional toll of their work, often feeling as though they were "putting out fires" without time to get ahead. Rod's reflection on the disconnection between humans and nature points to a deeper need for systems that honour natural cycles and foster interconnectedness. Heather echoes this sentiment, emphasizing the importance of seasonal rhythms, self-care, and supportive communities. Heather's metaphor of farmers being part of a larger ecological system—"I'm just one little mycorrhizal needing her fungi, bacteria, root systems, and voles"—captures the holistic nature of regenerative practices. This perspective challenges hierarchical approaches to agriculture, advocating instead for relationships of reciprocity and mutual care between people and the land.

While relational foodways demonstrate significant potential at the local level, the findings also highlight the importance of integrating these efforts with policy and praxis at broader scales. Participants acknowledged the need to engage more deeply with resistance literature to understand the broader implications of their work (Lilja, 2022). What types of resistance are being pursued? What strategies are most effective, and what lessons can be drawn from other movements? Addressing these questions in further research may help regenerative farmers better align their efforts with structural change. Without systemic support, small-scale regenerative farmers will continue to face economic and political barriers. By fostering stronger alliances between farmers, policymakers, and researchers, the impact of grassroots initiatives could be amplified.

The resistance and renewal dynamics observed in Wild Rose Country reveal how relationships with community and natural resources form the foundation of sustainable food systems. By fostering networks of collaboration, addressing challenges of social organization, and advocating for systemic change, regenerative farmers demonstrate the transformative potential of relational foodways. These practices not only sustain ecological and economic resilience but also nurture the cultural and human dimensions of agriculture, offering a model for a more just and interconnected future.

Relationships with Policy & Praxis

Canadian agricultural policy has long been shaped to favour large-scale agro-industrial models, often to the detriment of small-scale regenerative farmers. Policies that prioritize industrial efficiencies, corporate agribusiness interests, and export-oriented production create systemic barriers for small-scale farmers striving to implement relational foodways. These policies frequently manifest in land access challenges, restrictive seed-saving laws , and regulatory

frameworks that disproportionately burden smaller operations. For instance, the consolidation of farmland ownership, driven by rising costs and speculative investment, has rendered land increasingly inaccessible to new and aspiring farmers (Laforge et al., 2018; Magnan et al., 2022). Land-use bylaws across provinces vary in effectiveness, but many lack the robust protections necessary to prioritize local, small-scale agricultural production. As Kolby explains, the "no entry" signs for new farmers reflect a grim reality: retiring farmers are often unable to transfer their land affordably, while corporate entities and investors continue to consolidate control over agricultural resources.

In *Becoming A Young Farmer* (2024), several case studies illuminate the complex realities, challenges, and opportunities young and new farmers face in Canada. Critical agrarian scholars Joshua Nasielski, Sharada Srinivasan, Travis Jansen, and A. Haroon Akram-Lodhi (pp. 23-64) provide a foundational overview of the systemic barriers confronting young farmers nationwide, including high land prices, limited financing options, and inequitable policies. The authors argue that while passion and commitment are critical, they are insufficient without structural reforms and targeted supports. They advocate for interventions such as mentorship, land-sharing programs, and financial accessibility to empower the next generation of farmers. Building off the need for a broader, supportive policy framework, authors Hannah Jess Bihun and Annette Aurélie Desmarais (pp. 65-91) focus their scope on Manitoba, exploring how young farmers are adopting regenerative practices to transform conventional agriculture. Despite financial precarity and limited institutional support, these farmers are striving to restore soil health, enhance biodiversity, and reduce their ecological footprint, often in direct opposition to the industrial agricultural systems that dominate the region. Shifting the lens to Ontario, the subsequent chapter (pp. 93-118) depicts the emotional and financial strains of inheriting family

farms, including tensions over modernization and debt, while also examining the struggles of non-family entrants who lack access to established networks. To overcome these barriers, young farmers leverage collective ownership models and partnerships. The combined insights from these studies–and the contribution of this research–emphasize that while passion may be the spark, systemic support, innovation, and resilience are the essential pillars of a thriving future in Canadian agriculture.

Another critical element that regenerative farmers are concerned with is access to seeds. Seed sovereignty is constrained by intellectual property laws that protect corporate seed patents, impeding farmers' ability to save, share, and propagate seeds (Ceallaigh-Bisson et al., 2022). These laws often marginalize traditional and regenerative practices, which depend on biodiversity and locally adapted seed varieties. Canadian small-scale farmers are also grappling with the complexities of carbon markets, climate-change-driven environmental shifts, and the high costs of transitioning to sustainable methods, all within a policy landscape that seldom supports their unique needs. Funding opportunities, while more accessible than in previous decades, remain structured in ways that disadvantage small-scale and new farmers. Programs that require upfront investment, matching contributions, or significant bureaucratic navigation can exclude those without capital reserves or experience navigating these processes. As Alex and Kolby note, grants that allow in-kind contributions (e.g., labour hours) or provide installment-based reimbursements could significantly expand participation among new and diversified farmers.

The 1985 Canadian Meat Inspection Act, as recounted by Darrel Winter, underscores the inequitable burden of compliance on small-scale producers. While designed to standardize food safety, such regulations often disregard the economies of scale that allow larger operations to

absorb costs more easily. For farmers like the Winters, transitioning to meet new requirements meant scaling up production dramatically—turning a once self-sustaining operation into one that felt financially precarious. Before the Act, Winter's Turkeys operated on a modest scale, raising between 1,500 and 2,000 birds annually, with only one exceptional year reaching 2,500. Darrel recalls how their vertically integrated approach made this limited output sustainable. Although they didn't hatch their own eggs, they managed every other aspect: growing feed, raising chicks, processing and delivering the birds, and collecting payments. This efficiency eliminated intermediary costs, allowing them to make a living with relatively few turkeys. "I didn't realize how good we had it," Darrel chuckles, "because I always thought processing was pretty hard work."

The regulatory changes, which prohibited them from processing their own birds, marked a turning point. To adapt, they acquired quota, but this significantly altered their business model. Generating the same income as before now required raising about 10,000 birds annually, as they had to pay for hatchery services, feed, processing, and trucking. Darrel likened the new reality to "filling our pockets with money and cutting out the bottoms to see how far we could go before it all disappeared." Darrel's experiences highlight the systemic rigidity that prioritizes industrial efficiency over the adaptability and resilience of small, vertically integrated farms. Scaling up production required significant infrastructure upgrades, which Winter's Turkeys could only finance internally. These improvements had to comply with a complex web of municipal, provincial, and federal regulations governing inspection, sales, slaughter, transport, and marketing.

> "Around 1987, the government introduced a program to help farmers transition from unlicensed to licensed processing plants by covering 50% of the initial costs," Darrel recalls. "When an inspector came to review our buildings, he deemed our ceilings were too low but gave no specific measurement of how high

> they needed to be. On top of that, we had to install a separate bathroom and telephone specifically for the processing inspector. The total cost would have been around $100,000. Even if they covered half, they had the authority to demand more upgrades later, like adding refrigeration units or new floors. We were content with our operation, but if they weren't, they'd keep mandating changes until we couldn't afford to continue. There's no room for small-scale operations anymore; it's all about big business and legal red tape."

Despite these challenges, Lyle remains hopeful. He continues to explore investment programs for quota holders and actively applies for Canada Summer Jobs wage subsidies to support the growth and sustainability of the family business. Some promising policy recommendations, such as those proposed by the NFU (2015), aim to redress these inequities. These include restricting farmland ownership to provincial residents, incentivizing sustainable land stewardship and penalizing unsustainable practices, and supporting intergenerational land transfers (i.e., through community-owned land trusts or banks, community-based financing options, income-assurance plans, seller-finance options, and retirement savings programs). The NFU advocates for policies that regulate maximum land holding sizes, restrict the conversion of farmland to non-agricultural uses, and differentiate tax rates for farm families versus investors, foreign interests, and corporations. When implemented effectively, these measures could help establish a more equitable agrarian system that supports the principles of relational foodways.

To enable the viability of relational foodways and regenerative farming in Alberta, targeted policy frameworks must address the unique challenges faced by small-scale and ecological farmers while fostering broader systemic transformation. These policies should not only provide direct support to farmers but also enhance political engagement, knowledge-sharing, and the socio-economic conditions necessary for sustainable practices. Here, I outline specific policy recommendations, insights from my research, and the broader debates shaping the interplay between policy, practice, and transformation. For one, small-scale farmers

in Wild Rose Country have consistently highlighted the lack of insurance programs available to them. Traditional insurance models often prioritize large-scale operations, leaving smaller, diversified farms vulnerable to market fluctuations, crop failures, and extreme weather events like hail storms or tornadoes. Designing insurance products that consider the unique risks faced by regenerative farmers—such as crop diversification and reliance on ecological inputs—would provide a vital safety net and incentivize sustainable practices. In my research, farmers have also suggested the introduction of corporate procurement programs requiring companies to source a portion of their food from local farmers. For instance, corporations could collaborate with regenerative farmers to supply fresh, sustainable produce for employee meals. This not only creates stable markets for small-scale producers but also strengthens community ties and supports local economies.

Participants in storytelling sessions and farm exchanges strongly advocated for affordability payments or universal wages for farmers. This could take the form of a farmer's universal basic income (UBI), compensating producers for the public goods they provide, such as carbon sequestration, biodiversity conservation, and community health benefits. Such a policy would align with the "payment for ecosystem services" model increasingly adopted in other parts of the world (Le et al., 2024). Policies requiring supermarkets, food distributors (e.g., Discovery Organics), and wholesalers to donate unsold but edible food to food banks and emergency programs before it spoils would address food waste while supporting food security. This could be modeled on similar initiatives in France, where large supermarkets are legally obligated to redistribute surplus food. Farmers like Lachlan from West Quarter Farms see opportunities in programs like the Scientific Research and Experimental Development (SR&ED) tax incentive. Expanding the eligibility criteria for these programs to include experimental regenerative

farming techniques—such as snow capture on cover crop patches—could foster innovation while reducing financial barriers to sustainable practices. By integrating ecological metrics into tax credits, farmers could receive additional benefits for their environmental stewardship.

With the aging farming population in Canada, policies facilitating land transfers to younger farmers and non-traditional entrants into agriculture are crucial. This could include tax incentives for retiring farmers who sell or lease land to regenerative farmers, cooperative land-sharing programs, or subsidies for land trusts that preserve farmland for sustainable use. Additionally, expanding subsidies and low-interest loans for renewable energy technologies would reduce operational costs and environmental footprints, enabling farmers to scale their practices sustainably. Finally, my collaborators emphasized the importance of accessible knowledge-sharing systems to support innovation and collective learning. Publicly funded programs could expand digital and in-person platforms for farm exchanges, mentorship, and collaborative research. These initiatives would bridge the gap between local knowledge and national research efforts, fostering a vibrant community of practice.

Throughout my research and across my case study sites, I have observed varying degrees of political engagement. Some farmers were involved in years-long advocacy work that led to the legalization of On-Farm Slaughter and urban backyard hens. Rural farmers have participated on producer boards, in provincial conferences, and at national functions. A core focus of Grow Calgary was fighting for land-use changes at the municipal level[84] to support food production and Microhomes. Urban farmers worked with the City of Calgary to enable the production of food on publicly-leased land, and to sell produce at C-Train stations. While farmers in Wild Rose Country exhibit strong community ties and innovative approaches to farming, their engagement

[84] There are multiple news stories on the "battle" between Grow Calgary and the City of Calgary. See: https://calgaryherald.com/news/local-news/calgary-urban-farm-refusing-to-move-despite-order-from-province

with political and bureaucratic systems still remains limited. The cumbersome nature of navigating legislative and advocacy processes, combined with time constraints and an aging farming population, presents significant barriers. This is not necessarily an indication of disengagement but rather a structural limitation within the political system itself. Efforts to enhance political engagement could include 1) workshops and training sessions on advocacy skills, policy literacy, and navigating regulatory systems to empower farmers to effectively communicate their needs and priorities; 2) connecting farmers to existing advisory councils at the provincial and federal levels to ensure that more voices of small-scale and regenerative farmers are heard in policy debates; and 3) streamlining application procedures for grants, subsidies, and tax incentives to reduce the administrative burden on farmers, allowing them to focus on their core work.

The interplay between research, theory, and practice (praxis) offers critical pathways for fostering sustainable food systems. Participants in my research frequently highlighted the value of storytelling sessions, sharing circles, and farm exchanges as spaces for generating and disseminating knowledge. These activities serve as grassroots forums where farmers collaboratively address challenges and share strategies for adaptation. For instance, welding a homemade root washer and garlic planter, designing a passive solar greenhouse, and building coolers with a CoolBot emerged from such exchanges, showcasing the creative problem-solving capacity of the farming community. At the national level, debates around food system transformation increasingly emphasize the integration of local knowledge into policy frameworks. Organizations like the NFU and IPES-Food advocate for participatory approaches to policy design, where farmers and community stakeholders actively shape the direction of food systems. However, tensions remain between the top-down nature of government policies and the

bottom-up ethos of relational foodways. Bridging this gap requires sustained dialogue and collaboration between policymakers, farmers, researchers, and educators.

Food Studies Scholarship

Until recently, discourse in Food Studies pedagogy—the various ways that instructors, activists, and communities are teaching, learning, and intervening in their food processes (Meek & Tarlau, 2016)—has largely highlighted the role and impact of mechanized industrial agriculture (Emile, 2016; Kremen et al., 2012). This tendency has encompassed the social and ecological ramifications of an agrarian regime that emphasizes market privatization, corporatization, and extractive-led development platforms (Bernstein, 2009; Horrigan et al., 2002). Much of this critical scholarship engaged with Karl Marx's analysis of capitalism and a "metabolic rift" in food systems, including worker exploitation, inequitable division of labour, biophysical contradictions, and human/nature disconnection (Foster, 2013; Schneider & McMichael, 2010). On the other hand, there is an observed trend among leading institutions for agricultural education in Alberta (e.g., Olds College, University of Alberta) to promote conventional practices, with much of the research funding coming from large commodity crop associations.

Overtime, Food Studies scholarship has evolved to address the interconnectedness of social and ecological dynamics within food systems, encompassing production, harvesting, processing, distribution, consumption, and waste management (Knezevic et al., 2017; Stephens et al., 2019). Increasingly, research funding is being directed toward data-driven and technological farming that aim to balance efficiency with sustainability. Food scholars are joining small-scale farmers, Indigenous and peasant growers, and policymakers in advocating for agrarian models that prioritize ecological sustainability, social justice, and democratic

decision-making (Emile, 2016; McKay, 2020; McMichael, 2016; Scherr & McNeely, 2007; Vermeulen et al., 2012; Weis, 2010).

In pursuit of more sustainable agricultural practices, scholars are critically analyzing food pedagogy itself. Over the past two decades, Food Studies curricula have been reimagined to centre student learning, integrate systems thinking with practical application, and extend beyond traditional classroom settings (Gruenewald & Smith, 2014; Hilimire et al., 2014; Parr & Trexler, 2011). Participatory and transdisciplinary approaches provide students with critical, self-reflective experiences, fostering a deeper understanding of their academic, personal, and civic relationships to food and farming systems (Galt et al., 2013). By adopting creative and engaged theoretical and methodological frameworks, and collaborating with practitioners driving community-based food activism, Food Studies scholarship continues to contribute meaningfully to debates on sustainable food systems (Klinke & Samar, 2021b; Levkoe et al., 2020).

In the YAA program, Alex observes that some participants come from agriculture or horticulture programs but have never worked on a farm before. “Even if they don’t end up pursuing farming, they’ll gain a deeper awareness of the complexities of food systems, which will influence their future decisions and advocacy,” Alex explains. Before Regenera Ranch, Richmond worked at Olds College of Agriculture and Technology, where he coordinated an international practicum program with students from Chile and Mexico. Many agrarian universities in Mexico were born from struggles over land access and a commitment to ecological agriculture. Over twelve years, approximately 350 agricultural students travelled to Alberta to gain hands-on experience with organic operations of various scales. Some worked on organic cereal farms, experimenting with sweet clover for weed control and soil enrichment, while others participated in summer clear-cut grazing programs in B.C. A few regenerative farms

continue to host both new and returning students, reinforcing connections built during these exchanges. These programs not only introduce diverse practices and perspectives but also highlight the potential for agroecological principles to address global agricultural challenges.

Indigenous knowledge systems, deeply rooted in reciprocal relationships with the land, have long served as the foundation for holistic and sustainable food practices worldwide. Decolonizing Food Studies pedagogy requires not only incorporating these systems but actively respecting and upholding them as central to the field. While Food Studies has increasingly embraced land-based learning, it is crucial to avoid framing these approaches as "newly discovered" by modern institutional educators. Likewise, concepts such as relationality, regeneration, and the Commons are part of a much broader tapestry of ideologies that have sustained well-being for generations. Even in discussions and practices that advocate for alternatives to large-scale agro-industrial systems, the tools of hegemonic language, representation, and power persist. For example, figures often celebrated as the "Fathers" of permaculture, holistic management, organic farming, and SPIN farming (e.g., Bill Mollison, David Holmgren, Allan Savory, Curtis Stone) have been revered for contributions to what is often framed as a "new" body of knowledge. In truth, these practices are deeply rooted in systems of understanding that Indigenous communities have stewarded and refined over generations.

On Turtle Island, First Nations, Métis, and Inuit Peoples have learned on and from the land for thousands of years (Kimmerer, 2013). Dr. Taiaiake Alfred (2014), a scholar from Kahnawá:ke Mohawk Nation, emphasizes that mentoring and sustained relationships with the land form the core of Indigenous learning-teaching models. In decolonial frameworks, the land itself becomes pedagogy, fostering community-oriented ways of knowing (Betasamosake, 2014).

Process-oriented learning—on, from, and with the land—not only enriches Food Studies pedagogy but also strengthens small-scale farmers' engagement with land-based policies and practices. In Wild Rose Country, and Canada at large, the ongoing work of decolonizing agriculture and food systems must grapple with these dynamics, ensuring that Indigenous voices, histories, and practices are centered rather than appropriated or overshadowed.

At both local and national levels, debates about the future of agriculture often reflect broader tensions between industrial and regenerative paradigms. On one hand, agrarian policies continue to privilege agro-industry through subsidies, research funding, and market structures that favour commodity crops and high-input systems. On the other, grassroots movements and organizations like the NFU and LVC advocate for food sovereignty, sustainable practices, and farmer-led policy development. Key points of contention include land ownership models, the role of corporate actors, and the integration of climate resilience into agricultural planning. For instance, policies that allow foreign investment in farmland often drive up prices, exacerbating barriers for local farmers. Meanwhile, corporate-driven solutions to climate change, such as carbon offsets, risk marginalizing the role of small-scale farmers who are already practicing carbon sequestration through methods like cover cropping and agroforestry.

Participants identified the need for local hubs to facilitate these conversations and amplify farmer voices in policy debates. Models like the hub-and-spoke system at Coen Farm near Ferintosh demonstrate how localized networks can integrate grassroots efforts into broader frameworks, creating opportunities for collaboration and collective action. My research findings suggest that relational foodways thrive when supported by policies and practices that prioritize equity, ecological sustainability, and community resilience. This requires: 1) reforming agrarian policies by introducing measures to facilitate land access, protect seed sovereignty, and support

small-scale farmers through tailored funding mechanisms; 2) expanding knowledge-sharing networks by strengthening connections between local, provincial, and national organizations to enhance collaborative learning and advocacy; 3) integrating decolonial practices into policy and pedagogy by recognizing Indigenous knowledge systems as foundational to sustainable foodways; and 4) advancing inclusive dialogue by creating spaces where diverse stakeholders can engage in meaningful discussions about the future of agriculture, bridging divides across political and social lines.

By aligning policy with the principles of relational foodways, Canada can move toward a more just and sustainable food system that honours the interconnectedness of people, land, and resources. As winter approaches and plant life enters its time for rest, growers undertake the task of "putting their farms to bed." Irrigation equipment and tools are collected and stored to prevent freezing, breaking, or accidental damage. Row covers are mended and carefully stored for future use, while straw is spread over planted garlic to shield it from the elements and capture snow. Most plant stalks are left in the ground until spring, enriching the soil as they decompose. Pasture-grazed layer hens are moved into freshly-bedded barns to keep warm—especially since they're reluctant to walk on snow—while ducks, pigs, cattle, and sheep remain outside, requiring only winterized mobile huts. In a similar way, the next chapter "puts this dissertation to bed," addressing its scholarly and societal contributions, limitations, and recommendations for further research. Like the cycles of a farm, it lays the groundwork for continued growth, inviting reflection, renewal, and future inquiry.

Conclusion: Putting the Farm to Bed

The unequal divisions of labour and distribution in agricultural production continue to shape the dynamics of agrarian activities, entrenching systemic inequalities that disproportionately affect small-scale farmers and marginalized communities (Bernstein, 2009; 2010; Fairbairn et al., 2014). This research has sought to interrogate these dynamics by exploring how regenerative farmers in Wild Rose Country conceptualize and practice *relational foodways*. Through examining the political, socio-economic, gendered, ecological, and cultural-spiritual factors influencing these practices, this study has unearthed the conditions under which relational foodways thrive and their potential to foster food resilience and intercultural understanding.

Grounded in the rich and complex soils of Wild Rose Country's food and farming systems, this work began by situating itself within a broader critique of the global agrarian landscape. It wove together the intersecting legacies of colonialism, structural inequity, the patriarchy, and disconnections between one another and our environments—all perpetuated by an industrial agricultural model that prioritizes profit over people and planet. Drawing on the theories and frameworks of agrarian political economy and feminist political ecology, the concept of relational foodways was presented as an alternative lens through which to understand food systems. This approach critically examines dominant paradigms of "development" that emphasize food security and access without addressing the underlying hierarchies of power and control. My research, informed by my dual position as an academic and small-scale female grower, was deeply experiential and participatory. By engaging with diverse field sites and employing methodologies rooted in regenerative farming, farm exchanges, storytelling, and group sharing circles, I explored the lived realities of farmers navigating an agro-industrial complex. This approach brought theoretical debates into tangible focus, emphasizing the

pathways for food justice, the economic viability of small-scale producers, and the gendered relations of decision-making and labour.

The findings highlight both the promise and the precarity of alternative food and farming systems in Wild Rose Country. The visible increase in regenerative and agroecological producers reflects a growing commitment to sustainable practices and community resilience, greatly needed in a time of corporatized industrial agriculture (Emile, 2016). Yet, this growth exists alongside—and often in tension with—a rising demand for social programs addressing food insecurity, illustrating the persistence of systemic inequities. For small-scale growers, the stakes remain high: dispossession of land, restricted access to agrarian value chains, and exclusion from the means of production by corporate agro-industries threaten their livelihoods and the broader sustainability of food systems. Globally, the stakes are even greater. Our warming climate, exacerbated by greenhouse gas emissions from large-scale agribusiness, underscores the urgency for resilient and equitable food practices. Relational foodways offer a framework for fostering interconnectedness and mutual care, challenging extractive and hierarchical systems in favour of those that nurture ecological and cultural harmony.

As this research concludes, my hope is that it contributes meaningfully to collective efforts aimed at cultivating sustainable and equitable food systems. The insights gathered from Wild Rose Country may inspire broader dialogues and actions that prioritize relationality, justice, decoloniality, and resilience in the contemporary agrarian political economy. The pathways forward are neither singular nor simple, but the seeds of transformation lie in our shared commitment to reimagining how we grow, share, and relate to food.

Contributions to Scholarship & Society

My doctoral research offers significant theoretical and practical contributions to the study and practice of regenerating relational foodways within Wild Rose Country, particularly in the context of a capitalist global economy. It advances knowledge in the fields of land governance, property regimes, and the Commons while fostering socially inclusive and ecologically sustainable food systems. Herein, I summarize the key scholarly and societal insights derived from this work (Table 15), emphasizing its contribution to literature, practice, and community well-being.

	Scholarly Contributions	**Societal Benefits**
1	Theoretical Advancements in Land Governance & the Commons	Enhanced Food Resilience
2	Contribution of Relational Foodways Analytical Framework	Environmental Sustainability
3	Intersectional & Decolonial Methodologies	Social Inclusion & Cultural Revitalization
4	Epistemic & Practical Critiques of Food Injustice	Community Engagement & Practical Solutions
5	Alignment with Sustainable Development Goals	Educational & Policy Contributions

Table 15: Scholarly & Societal Benefits of Research

This dissertation builds on existing literature by critically examining the contradictions inherent in property regimes and land governance, as well as their implications for relational foodways. Drawing from scholars such as Naomi Beingessner (2013), Lauren Kepkiewicz and Bryan Dale (2019), it highlights pathways for reimagining land stewardship that centre reciprocity and communal responsibility. Additionally, it contributes to the discourse on the Commons (Basu et al., 2017; Chatterton & Pusey, 2020), offering practical applications for reconceptualizing land and resources as shared entities rather than commodified assets. To interrogate food injustice and its structural roots, this research employs intersectional and

decolonial frameworks (Absolon, 2011; Allison & Banerjee, 2014; Tuhiwai Smith, 2021). By engaging directly with Indigenous knowledge systems and community-based participatory approaches, it demonstrates the importance of epistemic critiques in reshaping foodways and governance practices. The experiential components of this work, including cultivating food and fostering intergenerational learning, further exemplify the value of grounding theoretical exploration in practical, relational contexts. Through co-authored publications and collaborations, this research critiques the structural production of food injustices while actively supporting community-led initiatives. By generating resources and media for local counterparts, it bridges gaps between academic critique and tangible community benefits, thus aligning scholarly inquiry with grassroots action (Calhoun, 2008; Levkoe et al., 2020; Reynolds et al., 2018).

Societally, this research promotes diverse and sustainable farming practices that enable communities to reduce reliance on industrialized food systems. By enhancing local food resilience, it strengthens food security and adaptability, particularly in the face of climate crises and economic instability. Through advocacy for regenerative farming techniques—such as polycultures, rotational grazing, and biodiverse soil restoration—this work contributes to ecological sustainability. These practices mitigate climate change, enhance biodiversity, and reduce the need for chemical inputs, improving the long-term health of agricultural landscapes. By learning from Indigenous foodways and amplifying marginalized voices—such as immigrant, gendered, and racialized growers—the research fosters socially inclusive spaces and supports AFNs. It ensures that diverse cultural practices and ecological knowledge systems are valued, preserved, and shared among future generations. The hands-on nature of this research—through direct participation in farming activities and collaborative community projects—ensures its

practical relevance. By co-developing solutions with local farmers and organizations, it provides actionable insights that directly benefit the community.

Insights from this work have informed educational programs, such as knowledge-sharing sessions and community workshops, inspiring broader adoption of regenerative practices. Additionally, by discussing the benefits of these practices, it offers a springboard for evidence-based policymaking that prioritizes sustainability and inclusivity. Aligning with several United Nations Sustainable Development Goals (SDGs)—including zero hunger, climate action, and life on land—this work provides a roadmap for policymakers and practitioners to advance sustainable development initiatives. The practical benefits of this work extend beyond academia, as demonstrated through community partnerships, educational initiatives, and interdisciplinary collaboration.

For example, in January 2021, I hosted the first Calgary Institute for the Humanities Food Studies Interdisciplinary Research Group Symposium, which brought together academics, community leaders, and Indigenous Elders to discuss *Food as a Tool for Social Change*. This event fostered critical dialogue and intercultural understanding (Graphic Set 2). Elder Evelyn Good Striker, a Lakota Dakota from Standing Buffalo First Nation in Saskatchewan and Cheyenne River Sioux Tribe in South Dakota, started the conference with a blessing, followed by a keynote address by Cree scholar Dr. Priscilla Settee. Shantel Tallow of Aahksoyo'p Indigenous Comfort Food, Kolby Peterson from YA, and Audra Stevenson from The Leftovers Foundation joined us in a community panel. Gertrude Korkor Samar and I co-presented our experience at Grow Calgary, facilitated the other scholarly talks, before ending the day with a participant gift raffle of Aahksoyo'p Nootski cookbooks.

Graphic Set 2: Food Studies Symposium Graphics, *graphics by María del Carmen Páez Rubio*

Alongside my key counterparts, Sara and Oscar, we have co-presented our collaborative research experience in public and academic forums (see Appendix G for Knowledge Dissemination). I have also invited Sara and Oscar to speak in four of my sessional undergraduate courses, where they facilitated sharing circles to foster active, reciprocal learning (Rozanski et al., 2024). These activities led to monthly gatherings outside of class and co-authored publications on decolonial ways of teaching and learning in Higher Education. Outside of this research context, I supported Oscar with writing proposals for his labour union's Political Action Committee, helped Oscar and Sara's daughter apply to graduate school, edited visa applications for Chilean agronomists to work at Regenera Ranch, attended cultural gatherings in Siksika with Richmond and Sara, and "farm-sat" for several farms so their operators could take much needed breaks. Collaborating with my counterparts and supporting community-based initiatives grounded my work in real-life practice, enriching both the research process and its societal impact.

Through a synthesis of theory and practice, this dissertation has cultivated material, symbolic, and social benefits for the communities it has engaged (Lassiter, 2005). These

contributions emphasize the importance of fostering ethical, reciprocal relationships among all living beings and the land. Moving forward, I aim to continue this work by welcoming diverse perspectives—children, elders, practitioners, and scholars alike—into an ongoing dialogue about sustainable, inclusive, and resilient food systems. In conclusion, this research not only advances scholarly understanding of relational foodways but also serves as a catalyst for societal transformation. By deepening our understanding on the benefits of relational foodways, it can help policymakers develop and implement policies that support regenerative agricultural practices, including incentives for farmers to adopt regenerative techniques and funding for community-based agricultural projects. By integrating theoretical insights with practical applications, it offers a model for cultivating sustainable and inclusive agricultural systems that can be adapted across diverse contexts. Finally, my work highlights the importance of collaboration between different sectors, which has the potential to inform policies that encourage partnerships between academia, government, and local communities to address complex agricultural and environmental challenges.

Implications

Here, I outline the implications of my research on the pathways, pitfalls, and politics of regenerative agriculture in Wild Rose Country, through an analytical framework of relational foodways. These implications are discussed in terms of opportunities and challenges for relational agrarianism, conditions under which relational foodways thrive, and strategies to enable these practices to support food resilience and intercultural understanding. I also explore the potential for urban regenerative practices and EXL partnerships to foster more socially and ecologically sustainable food systems. Finally, I discuss the academic, practical, and policy implications of this research. It is important to state how the views expressed are those of my

research collaborators and do not necessarily represent regenerative farmers *at large*. Any one group of people will have differing perspectives that should be accounted for and respected through the practice of cultural relativism. Nevertheless, these findings will provide key insights into the broader significance of alternatives to the agro-industrial regime.

Regenerative farmers in Wild Rose Country conceptualize relational foodways as a set of practices and values that emphasize ecological stewardship, community reciprocity, intergenerational linkages, and intercultural connections. These farmers understand their work as deeply intertwined with the socio-ecological systems they inhabit. Practices include seed saving, shared labour initiatives, and reciprocal exchanges of knowledge and resources. Collaborative efforts, such as shared infrastructure and knowledge exchanges, enhance resilience against external shocks, including economic volatility and climate change. Thus, farmers participating in relational foodways strengthen community networks and contribute to local food resilience. However, they also encounter challenges such as market pressures, land tenure insecurity, and limited access to policy support. Barriers to entry, such as high land costs and bureaucratic hurdles, disproportionately affect small-scale farmers and marginalized groups. Moreover, the broader agro-industrial framework, which prioritizes efficiency and profit, often undermines relational values.

Farmers' ability to adopt regenerative practices is shaped by intersecting factors. Firstly, policies favouring large-scale agriculture and subsidies for conventional inputs create a competitive disadvantage for regenerative farmers. Corporate consolidation in supply chains and market monopolies further limit farmers' agency. Secondly, female and non-binary farmers still face the historical legacy of unequal access to land, financing, and leadership opportunities within agrarian networks. Yet, they play crucial roles in fostering relational foodways,

particularly in community-building and knowledge-sharing. Thirdly, farmers confront unpredictable weather patterns, soil degradation, and water scarcity, which complicate regenerative efforts but also highlight the necessity of ecological approaches. The conditions that enable relational foodways to thrive prioritize equity, community engagement, and ecological resilience. Key enabling factors include accessible land-use policies that support small-scale and urban farmers; strong networks for knowledge-sharing and cooperative decision-making; and supportive policy frameworks, such as subsidies for regenerative practices and incentives for local food procurement. Conversely, relational foodways are impeded by fragmented food systems that disconnect producers and consumers, and insufficient institutional recognition of the value of relational and ecological practices.

Relational foodways hold the potential to support food resilience by diversifying production systems, preserving local knowledge, and fostering adaptive capacities. They also promote intergenerational linkages and intercultural understanding by creating spaces for collaboration among diverse stakeholders, including youth and elders, Indigenous communities, immigrant farmers, and urban residents. However, these outcomes depend on inclusive governance and sustained investment in community-driven initiatives. Urban farmers have a unique role in advancing regenerative practices for local AFNs. By adopting land-based regenerative techniques—such as no-till gardening, composting, and pollinator-friendly planting—urban growers can complement rural efforts while addressing urban food security challenges. To territorially scale these efforts, urban-regenerative integration requires municipal policies that allocate unused land, businesses and household yards for urban agriculture; investments in education and training programs for urban farmers; and partnerships between urban growers and local AFNs to streamline supply chains and ensure equitable distribution.

Municipal infrastructure investments, such as collectively-shared coolers in close proximity to market outlets, would also support the needs of small-scale producers.

Another key finding is how EXL partnerships between student researchers, farmers, and agricultural organizations create opportunities for bridging research, theory, and practice. In Wild Rose Country, these partnerships have facilitated collaborative problem-solving through storytelling sessions, group sharing circles, and farm exchanges; enhanced the capacity of community-guided food networks to address wider societal needs, such as food insecurity and ecological restoration; and provided valuable insights into organizational dynamics, including what supports are most effective for farmers and what barriers remain. By fostering co-learning and mutual accountability, EXL partnerships contribute to the long-term sustainability of food systems and provide a model that can be adapted for other regions. Within academia, this research advances the theoretical and methodological understanding of food system transformation in several ways. For one, it contributes to the growing body of literature on relational foodscapes (Goodman, 2015), relational approaches to farming and food procurement (Darnhofer, 2021; Glickman et al., 2021), relational food culture (O'Kane, 2016) by linking these practices to broader socio-political dynamics and situating them within the political economy of food. Two, the participatory and emic approach—emphasizing storytelling, co-reflection, and collaborative evaluation—offers a robust framework for integrating lived experiences into academic research (Donaghy & Linkiewich, 2024; Making the Shift, n.d.).

This work also has practical and policy implications. Policy recommendations include supportive legislation that prioritizes land access, renewable energy adoption, and ecosystem services payments for small-scale farmers; market interventions such as subsidies for local food procurement, coupled with mandatory food redistribution programs that can reduce food waste

and enhance equity; and initiatives that address persistent gender disparities in agriculture, such as funding for women-led cooperatives and seed-saving initiatives. Practical applications include capacity-building, where workshops and training on regenerative techniques could empower farmers and urban growers to adopt sustainable practices; and community engagement through the expansion of platforms for dialogue and co-learning to ensure that diverse voices are represented in food system decision-making. In all, the pathways, pitfalls, and politics of regenerative agriculture in Canada reveal both the promise and the complexity of relational foodways. This research underscores the importance of addressing systemic barriers while creating enabling conditions for farmers to thrive. By advancing theoretical insights and offering actionable policy and practical recommendations, this work contributes to ongoing efforts to build a more just and sustainable food system in Wild Rose Country and beyond. Moving forward, the integration of grassroots perspectives, urban-rural collaborations, and EXL partnerships will be critical in navigating the opportunities and limitations for food system transformation.

Limitations

Relational foodways are deeply intertwined with the landscapes, cultures, communities, and climates of specific regions. These relationships are shaped by cultural epistemologies, which imbue terms like ‘relational foodways,’ ‘regeneration,’ and ‘community’ with overlapping and varied meanings. For example, to a Siksikaitapi, or Blackfoot-speaking person, regeneration may encompass political movements such as Land Back or the reintroduction of the bison for jump harvests. For a regenerative farmer, the term might centre around fostering cyclical relationships with plants and animals, with goals such as sequestering carbon, regenerating biodiverse soils, capturing water, and distributing harvests through AFNs. Operating on a tight budget, a food

access agency chef may prioritize collaboration with food banks and supermarkets to secure sufficient, affordable food supplies for their clientele. Despite their distinct interpretations, all are influenced—albeit in different ways and to varying degrees—by the global economic and political system, as well as the climatic impacts of increased atmospheric warming, decreased precipitation, and seasonal fluctuations (Altieri et al., 2015; Sandford, 2015).

According to Agriculture and Agri-Food Canada (2023), the country's entire agriculture and agri-food system employed 2.3 million people in 2022, generating approximately 7.0% of the nation's gross domestic product (GDP). Canada's largest commodity sectors (i.e., crop production, animal production, food and beverage) were not all observed in my research. I did not, for instance, interview Albertan canola or wheat farmers, who generated a combined $5.6 billion between 2018-2022. The cattle ranchers I worked with and learned from engaged in regenerative practices; I did not have the opportunity to speak to feedlot operators. While I established a relationship with two Temporary Foreign Workers (TFW) from Chile, my research did not investigate Canada's Seasonal Agricultural Worker Program (SAWP). Although I attended the 2022 Organic Alberta Conference with YA, where regional producers from the total 5,658 organic farms in Canada coalesced, my research questions were directed more toward community networks engaging in regenerative cultivation, as opposed to certified organic. Furthermore, while I helped a family grow their household garden on Siksika First Nation and came to know cattle ranchers with grazing leases on Crown Land, the scope of my research did not investigate these land access dynamics.

One of the core objectives of a relational foodways approach is to facilitate dialogue among diverse actors, bringing together their varied strengths, needs, and ideas. This approach aims to address potential contradictions while exploring pathways toward collective, sustainable

action. In recent years, there has been a gradual increase in interactions among food producers, distributors, and social agencies. However, much of this work remains siloed. Academics often focus on theoretical studies conducted within universities, farmers dedicate extensive hours to crop and livestock care, agencies strive to meet escalating demands for essential services, and policymakers contend with ever-shifting agendas. To scale up relational foodways sustainably, Director of The Food Connection in the UK, Lilian Brislen (2018), emphasizes the need for diversifying relationships. Systemic transformations, I argue, will materialize only when these silos are dismantled, enabling practitioners to reconnect with each other and the systems they inhabit. By building coalitions across sectors, practitioners and researchers can draw on shared frameworks and ideologies, tailoring these to address the unique needs of their respective communities and networks.

Throughout my research, I have sought to address my own limitations through self-reflexivity, collaborative approaches, and iterative evaluation. These evaluations—whether conducted individually or collectively among citizen researchers—provided an opportunity to critically reflect on my beliefs, voice apprehensions, and make necessary adjustments. As Stephanie Irlbacher-Fox (2014) states, "settler privilege lies as the basis of injustice… overcoming this privilege is a form of co-resistance central to co-existence" (p. 146). This acknowledgment necessitates not only critical examination of colonial histories but also active reconciliation efforts that actualize social and environmental justice. Whether through growing, gathering, or sharing food, it is imperative to honour the histories and First Peoples of the lands on which we sustain ourselves. Situated on Treaty 7 territory, my research has illuminated the systemic ways in which academics and farmers have been privileged to learn and thrive on Turtle Island, often at the expense of forcibly displaced Indigenous Peoples (Aldern & Goode, 2014;

Carter, 1990; Kepkiewicz, 2015; Matties, 2016). This awareness entails a commitment to fostering "ethical spaces of engagement" as outlined by Cree scholar Dr. Willie Ermine (2007). Dr. Ermine's framework proposes a space for dialogue and cooperation between Indigenous Peoples and Western institutions. While his work addresses the intersections of Indigenous and Canadian legal systems, the principles of his model are applicable to relational foodways. These ethical spaces—grounded in diversity, mutual respect, and open dialogue—hold transformative potential for reshaping food systems and strengthening intercultural, intergenerational, and ethnoecological connections.

Recommendations for Further Research

This dissertation highlights the need for continued exploration and collaboration to advance sustainable, equitable food systems. Future research could delve into specific political limitations faced by small-scale growers, including control over critical resources such as seeds, water, and land. Examining the policies and lived experiences of migrant and unpaid labourers, the implications of international food trade agreements, and collective food preservation strategies are equally crucial areas for study. Further research on cooperative farming, land-sharing models, and circular food economies would also enrich Critical Agrarian Studies discourse (Claeys et al., 2021; Dale, 2021; Sumner et al., 2014). Additional research could evaluate the effectiveness and long-term viability of alternative distribution models, such as pay-what-you-want markets, decommodification initiatives, the gift card approach, and UBI programs. Stakeholders in the YYC Food Collaborative expressed interest in exploring dignified, culturally appropriate food systems where individuals retain agency and choice. One member posed the vital questions: "What would a food system look like if we had all the resources and support in place? How could we design an equitable system from scratch, co-creating it with those experiencing food

insecurity?" Others emphasized the importance of identifying localized, actionable strategies to eliminate food insecurity for a month as a starting point for broader interventions.

In Western Canada, more research at large should foreground the experiences of racialized, immigrant, female and gender-diverse, disabled, and Indigenous growers. Partnering with Indigenous Knowledge Keepers from Treaty 7 to explore culturally specific approaches to land regeneration and relational foodways would offer profound insights. Further study is needed on the intersections and tensions between Indigenous Food and Land Sovereignty movements and non-Indigenous efforts to reCommon and decommodify food systems, as well as the privatization of land on unceded territories (Grey & Patel, 2014; Kepkiewicz & Dale, 2019). The integration of Indigenous knowledges in urban farming initiatives, as well as the incorporation of land-based EXL farming in post-secondary pedagogy (Klinke & Samar, 2021a), deserve greater attention. As urban agriculture becomes more prolific, comparative analyses between SPIN farming and rural vegetable farming of similar acreage could provide insights into resource efficiency, yields, and community impact. Moreover, the cumulative impact of replicating neighbourhood block food-growing initiatives in urban settings worldwide warrants quantitative studies, complemented by qualitative research into participant perceptions of local food accessibility and health benefits.

Collaborative efforts between researchers and local communities could advocate for policies that support communal land use and prioritize community needs over corporate interests. As a regenerative farmer, Richmond of Regenera Ranch suggested ecological research to measure pasture productivity in brush-covered areas of the Rosebud River coulee. This reflects a broader need to shift agricultural research priorities toward small-scale, regenerative practices often overlooked in favour of conventional industry interests. Existing partnerships between

organizations such as YA, The Immigrant Education Society, Leftovers Foundation, and academic institutions like the University of Calgary exemplify the potential for impactful, interdisciplinary research. These collaborations can address pressing issues like soil health, refugee integration, and food rescue solutions. Efforts like the City of Calgary's CalgaryEATS! initiative and Food Resilience Program demonstrate how municipal engagement can drive systemic change (Bailey, 2021). Research on local grower cooperatives, farmer-to-farmer knowledge mobilization, and partnerships with national organizations such as the NFU has deepened our understanding of pathways and pitfalls for sustainable food system change (Barbosa & Burns, 2021; Beckie & Bacon, 2019; Dale, 2021; Klinke & Samar, 2021a, 2021b; Rosol & Barbosa, 2021). Nevertheless, there is still a pressing need for local hubs that connect producers, consumers, researchers, policymakers, and other stakeholders to foster knowledge sharing and coordinated action.

To build upon these findings, my collaborators and I propose the formation of a local food systems consortium to exchange ideas, connect initiatives, and deepen community ties. Other forums and activities that may come from this research include farmer-led workshops, a community newsletter, a podcast and book club series, digital storytelling projects, youth camps, and international dialogues with organizations like LVC (Dale, 2021). As an activist-scholar pursuing a career in Higher Education, I aim to integrate these insights into my teaching and community outreach. By fostering land-based learning, building place-based relationships, and promoting global coalitions, I hope to contribute to knowledge exchanges that empower communities and advance sustainable, relational foodways. To reflect on the past five annual cycles of growth, I conclude my dissertation with one last storytelling vignette.

Final Reflection: Cycles of Growth

Shhh, Shhh. Wrapped in my great-grandmother's knitted blanket, I rock my baby back and forth, cradled by the soft moonlight of the Winter Solstice. It is the darkest evening of the year–a time to slow down, share stories, and reflect on the cycles of growth that shape our lives. I look to the nightstand where rests a willow basket, woven years ago from red, brown, and yellow whips. This basket, aged and worn, carries more than objects; it holds memories, lessons, and the wisdom of lived experience. Over time, its handle has loosened, its rods dulled, yet it remains resilient—a companion through many seasons.

It has cupped fungi and winterberries, lichen and tufts of grizzly furr; the seeds of Silverberry to bead into necklaces, and feathers from our friend magpie, *Mamiá'tsikimi* in Blackfoot. Stained purple from haskaps and infused with soil from tiny hands, it carries stories of the land and her gifts. I can still feel the sticky residue of tobacco leaves that we grew and dried for Blackfoot Elders; the scent of an *Artemisia ludoviciana* smudge, which we gathered in a good way (Figure Set 31). My basket has clutched jars of golden honey from our bees and bouquets of strawflowers for neighbours; freshly baked rolls from Sara and Oscar, and Shantel's delicious pemmican. It has walked with me across Wild Rose Country, coming to know the hidden fresh springs and patches of strawberries. She has met *Áwatoyi* the white tailed deer, *Kiááyo* the bear, and *Kákanottsstookii* the great horned owl. Like me, she has fallen down, been lost, lifted up by others, and found purpose anew.

Figure Set 31: Haskap berries (*left*); *Artemisia ludoviciana* (*right*)

Shhh, Shhh. Placing my baby back in his crib, I hold the basket close. It is now heavy with the weight of possibility, brimming with lessons gathered daily as a mother, a farmer, and an educator. Each day brings new life: lambs stumbling into the world, tender carrot seedlings pushing through the soil, and a child's first words. This basket is both a container and a commitment, a symbol of the relational foodways I hope to nurture for my children and the generations to come. Each item it has carried tells a story.

Squish. I close my eyes and imagine the tart juice of a haskap, savouring each bite alongside the family of Cedar Waxwings. The berries are a lesson in resilience, their blossoms defying early summer's chill, a quiet promise of fruit to come. *Buzz*. The honey speaks of collaboration. It is the result of countless tiny dances, each bee returning to the hive with a story of nectar-rich blooms. Relational foodways are like honey: they cannot exist in isolation. They

require the shared work of many—farmers, foragers, neighbours, elders—to create something sweet and enduring.

Ding. And then there's Oscar's fragrant bread, warm from the oven. We spread saskatoon jam on the loaves, which I traded at the farmers market for my fresh herbs. Dr. Robin Wall Kimmerer (2024) calls this a gift economy: webs of interdependence and mutual self-reliance where sharing is the currency. "The move toward a local food economy is not just about freshness and food miles and carbon footprints and soil organic matter…but also about the deep human desire for connection, for honor, to be in reciprocity with the gifts that are given you" (p. 92). My basket reminds me that a thriving food system is not a series of transactions but a network of relationships.

I look down at my sleeping child, his chest peacefully rising and falling. Holding the basket against me, it too moves with the rhythm of my breath. Our baskets of knowledge are not ours alone. They belong to our children, to their children, to the neighbours that share our table, to the beings that live in the ecobuffers, and to the mycorrhizae that connects us all. They are a living symbol of relational foodways, an ethos that values connection over consumption, care over convenience. When I think about the future I want to leave for my children, I imagine a food system as abundant and diverse as the basket itself. One where haskap berries are not merely commodities but reminders of the land's resilience. One where honey is not extracted but shared, its sweetness a metaphor for the interconnected labour of many hands and wings. One where bread is not a product but a process, a daily ritual of nourishment and gratitude. With sticky fingers, children would knead the dough and listen to stories of the land and Peoples who steward it, planting seeds of understanding as deep as those in the soil.

Like motherhood, research and envisioning a regenerative food system are not just about

filling the basket–they are about birthing a new generation with the teachings on how to weave their own and carry it forward with care and intention. I smile, thinking of my dear friend Kolby, who became a mother the same month I did. “The labour process is necessary, sometimes messy and beyond your control, but at the end, you’re holding your baby,” she smiles, “When I think about huge social movements and revolutions, it’s remarkable. You might not see the outcome in your lifetime, but people labour for it anyway.” Her reflection mirrors the cycles of growth we experience in farming and foodways. Each season, we care for crops knowing that our efforts contribute to something larger than ourselves.

With renewed energy from winter, we prepare the soil using low-till methods. We sow row upon row of beans by hand, carefully laying out drip irrigation and staking hoops for Remay. For the beds needing extra warmth, we roll out compostable black mulch. The steady work of hand-weeding begins and continues throughout the season, interspersed with thinning and harvesting. After finishing our full-time jobs, we wash, dry, and package vegetables to sell at the weekly Mountain View Growers market table (Figure Set 32). When frost signals the end of field crops, we store the remaining squash and roots, plant garlic for the following year, and “put the farm to bed.” Shelves begin to fill with jars of honey, braided alliums, grain stooks, and carefully saved seeds for replanting and gifting. With bee boxes winterized and the freezer stocked with Wichert beef and Winter’s turkey, we begin envisioning the future. Perhaps we’ll add cut flowers for arrangements or start a CSA with other members of the ‘farm friend collective.’ We might order cuttings for a mixed fruit U-Pick or enroll in welding classes to build a root washer and undercutter. Undoubtedly, we will redesign next year’s crop plan over and again, and gather around the table to share dreams and friendship.

Figure Set 32: Mountain View Growers market table (*left*); Research Mentor, Sara (*right*)

Half asleep, I bend down and kiss my son's cheek. As the Winter Solstice draws to a close, I place the willow basket back on the nightstand, grateful for its teachings. Native to Turtle Island, the catkins of Pussy Willow are one of the first signs of Spring, alongside Prairie Crocus. Her flowers and shoots provide long-lasting sustenance for wildlife like *Naamóó*, the bee, and *Ponoká*, the elk. Her thick branches offer shelter for *Kaanaisskiinaa*, the humble field mouse, and nesting sites for *Pi'ksíí,* the birds. With deep, extensive roots, she maintains the abundance of water in her surrounding environment by creating channels for the water to flow and by absorbing excess moisture during heavy rainfalls or snowmelts. Willow is also medicine. When our heads ache, we mindfully nibble on her bitter bark: "nature's aspirin." Her colourful whips are revered by basket weavers and wreath-makers alike, and stories from around the world tell of her cultural significance.

Willow's flexibility is her strength, much like the foodways my collaborators and I hope to nurture. These pathways are not rigid; they grow and change, adapting to the seasons and the stories of those who walk them. This lesson reminds me of Sara, my friend, mentor, and research counterpart (Figure Set 32). Now in her late eighties, she reflects back on her life fighting for a better world. "I will be alive when I die, *mi Rosalinda*" she remarks, speaking to the enduring fire that kindles her resistance. Someday, when my hair is grey and I am too weak to carry my melon basket, I will find peace knowing it will continue to hold the abundance of a food system rooted in love, reciprocity, and care. With each passing year, my children will learn to tend the land, honour the animals, respect the rivers and the forests, and live in relation with the willows and wild roses. They will weave their own baskets, filling them with their own lessons and dreams, sharing them with others. Placing my great-grandmother's blanket over the rocking chair, she reminds me how our collective baskets will carry the future, but only when we weave them together.

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Appendices

Appendix A: 2020-21 Internship Letters

Dear Chelsea Klinke,

I am pleased to extend our offer for the position of Executive Director in our Small-Scale Farm Management Internship 2020 Program. In this position, you will work both virtually and on-site at the Grow Calgary Farm at address 293117 Township Rd 263, Balzac, Alberta, Canada T0M 0E0. You will report to Paul Hughes, the President and Senior Farm Manager of Grow Calgary (GC).

- Your duties and responsibilities are to:
    - Answer emails and phone calls to coordinate volunteer sessions on the farm for corporate, educational, and community groups.
    - Communicate to groups what they should expect for their volunteer session.
    - Input volunteer bookings in the Corporations, Organizations, Groups, and Schools Calendar.
    - Follow up to confirm a day before that scheduled corporate, educational, and community groups will come for their session.
    - Notify the President and Farm Operations Manager of any cancelled bookings for the following day.
    - Answer any inquiries of groups and follow up after their volunteer session for feedback.
    - Research and contact via email and phone calls potential partners and sponsors for GC.
    - Register Grow Calgary for outreach efforts by researching and contacting sustainability oriented event organizers to schedule GC in for a speaking engagement or boothing opportunity.
    - Conduct weekly phone calls with Grow Calgary's President to provide updates and receive confirmation on upcoming event and sponsorship opportunities.
    - Attend and represent GC at major GC events as a spokesperson, whether on the farm or elsewhere along with other GC team members.

- Work Hours: You are expected to work on average, 20 hours a week, and meet your deliverables by stated deadlines.
- Effective Start Date and End Date: The effective start and end dates are June 1, 2020 and August 31, 2020 respectively. Should you need to resign from the internship earlier than the end date, please provide notice to Paul Hughes.
- Probationary Period: There is no probationary period after the interview is conducted and an offer is made.
- Travel Requirements: Travel to the farm site may be required and you are expected to have access to a vehicle.
- Remuneration: You will not be receiving remuneration under this position. This is an unpaid internship.
- Benefits:You will not be receiving any benefits (health, dental, childcare, etc.) under this position

- Termination: If you wish to terminate your internship with Grow Calgary, please provide a notice of intention to terminate at least a week before you leave the organization. If your internship with Grow Calgary is terminated, you will receive a written notice of termination.

Chelsea, we look forward to establishing a professional working relationship with you and welcome you to our internship team!
Yours truly,

Paul Hughes
President & Senior Farm Manager, Grow Calgary
https://growcalgary.ca/

Dear Chelsea Rozanski,

I am pleased to offer you the position of Regenerative Farming Intern with Root and Regenerate Urban Farms this 2021 growing season. In this position, you will work at the various plots managed by RRUF within Calgary, AB. You will report to Michael Gavin, the owner and operator of RRUF.

Duties and Responsibilities:
- Building and designing garden spaces for customers.
- Consulting with customers on their garden needs and developing quotes.
- Designing and implementing crop plans.
- Seed propagation and transplanting.
- Creating new farm plots for the following season.
- Setting up irrigation systems, and wash/harvest/pack stations.
- Harvesting, washing, and packaging produce.
- Running farmers market stands and harvest box pick up locations.
- Attending and participating in Dirtboys events, such as farm tours.

You will be working 20 hours per week on whatever tasks are required. The effective start date is June 1st, 2021 and the end date is August 31st, 2021. There is a 30 day probationary period. Travel to the farm sites is required and you are expected to have access to a vehicle. You will not be receiving remuneration under this position. This is an unpaid internship. You will not be receiving any benefits (health, dental, childcare, etc.) under this position. If you wish to terminate your internship with RRUF, please provide a notice of intention to terminate at least a week before you leave the organization. If your internship with RRUF is terminated, you will receive a written notice of termination.

Chelsea, we look forward to having you on board this 2021 growing season!
Regards,

Michael Gavin
Owner and operator, Root and Regenerate Urban Farms
https://www.rootandregeneratefarm.ca/

Appendix B: Letter of Support from Key Counterparts

Letter of Support/"Initial Contact" from Key Community Counterparts, 30 January 2022

To the University of Calgary Conjoint Faculties Research Ethics Board,

We are pleased to provide this letter of support for Anthropology Doctoral student, Chelsea Rozanski, to conduct collaborative research among our grower-activist collective in Greater Forest Lawn (GFL), Calgary, Canada.

Myself, Sara Rodriguez Huenchullan, and my partner, Oscar Jara, are long-time residents of GFL. We first met Chelsea in September, 2020, while we were helping generational farmers at Winter's Turkeys Farm load their birds onto transport trucks for the holidays. We were so impressed by the work ethic and selflessness Chelsea demonstrated; while others expected to be paid, Chelsea was genuinely interested in establishing a relationship with the farm and supporting where needed. Since that time, we have grown our relationship with Chelsea, meeting weekly to talk about the politics of poverty, food insecurity, and isolation in our neighbourhood.

We have a very personal history, and continued reality, with these challenges. Born in Chile, Oscar and I suffered under Pinochet's authoritarian military dictatorship. We faced political imprisonment and torture for several years before being liberated by the Canadian Government. I was brought to Calgary in 1975, Oscar in 1977, forbidden to return to Chile until amnesty was granted in 1988. We returned to Chile but continued to face persecution, forcing us to leave our home yet again for Alberta. Upon the second arrival, my granddaughter and I did not have a place to sleep nor food to eat because we did not have any money to bring. Living on the streets for months, we found shelter with Inn From the Cold until I could send money to Oscar to join us. As an Indigenous Mapuche woman, I never gave up; I relied upon my 83 years of life experiences organizing community and growing collective power to rebuild a life for myself and my family. So the work we are doing, and have asked Chelsea to accompany us in doing through her research, is coming from solidarity in resistance to the system.

While adapting to the ever-changing COVID-19 regulations, we asked Chelsea if she could help us transform our yards into vegetable and medicine gardens, along with hens for eggs, as a tool to engage our neighbourhood block and grow a collective. And so we did, from May to August 2021. Friends at Winter's Turkeys Farm and the UCalgary Community Garden gifted us seeds for vegetables, flowers, and cover crops. A farmer friend of ours built raised beds and brought truckloads of compost to fill them. Mulch for pathways was donated by one of the city's arborist companies. Another friend helped Oscar build the chicken coop, while Root and Regenerate Urban Farms assisted in setting up a compost system and planted rows. Soon, our neighbours' curiosity was piqued and they began bringing lawn clippings, old tools, transplants, scraps for the chickens, and their ideas for the space. When we gave them eggs or swiss chard, some returned with freshly-baked bread and potted tomato plants, while others weeded the strawberry bed. The children of the community would say to their parents, "let's go to Sara's farm!" We began organizing small monthly gatherings to learn more about one another and feel safe to express our problems. How could we create solutions as a community to overcome our common struggles?

In time, we formed a “grower-activist collective” and collaborated with Chelsea in the design of her research questions, objectives, methods, and hopeful outcomes. We have sat together during each stage of her graduate program, including the design of her ethics applications for which we write this letter of support. Chelsea’s research will directly align with the activities put forth by ourselves and the circle, including farm tours, learning walks, urban farming, group sharing circles, and storytelling. These are activities that we know will add depth and meaning to our movement. We felt strongly about departing from colonial methodologies (i.e. surveys and structured interviews) to ones where we could truly tell our stories and learn from generational farmers and Knowledge Keepers of the lands we live on.

From the beginning of each interaction with a new member of our current 17-member circle, Chelsea has been upfront about her positionality and role as a researcher, regenerative farmer, and community member. When discussing her proposal, she has also been clear how her research will be one part of a broader, ongoing social movement. From May to August 2022, and again in 2023, Chelsea will collaborate with members of GFL to grow a more resilient local food system, to increase intercultural understanding, and to build political education among her/our neighbours. Along the way, we will support Chelsea’s research as her key community counterparts by recruiting more participants through word of mouth and putting up recruitment posters, offering our house as a central meeting point to learn more about her work and our broader efforts, and provide critical feedback as she develops her thesis. We will also walk alongside Chelsea as we tour farms, humbly learn from Indigenous kin while traversing Treaty 7 lands, engage community members in sharing circles and storytelling, and regenerate our neighbourhoods with flowers and crops to share.

It is our understanding that this research study must obtain approval from the University of Calgary Conjoint Faculties Research Ethics Board. Please do not hesitate to reach out if you have any questions or concerns regarding Chelsea’s doctoral research and ethics application. We are in full support.

Sincerely,

Sara Rodriguez Huenchullan & Oscar Jara
Key Community Counterparts and Members of the GFL Grower-Activist Circle
Calgary, Canada

Appendix C: Research and Program Timeline

Sept 2019-April 2020	Coursework Completed
May-August 2020	Preliminary Fieldwork: Internship #1 Grow Calgary Community-Building with Agrarian Network
Sept 2020-April 2021	Identified Key Community Counterparts Completed Language Proficiency Examination
May-August 2021 Vanier Funding Year 1	Established Supervisory Committee Primary Fieldwork 1: Internship #2 RRUF Community-Building with Agrarian Network Experiential gardening in GFL Developed Proposal with Key Community Counterparts
Sept 2021-April 2022	Completed Written Dissertation Proposal Compiled Field of Study Reading Lists & Areas of Interest Established Examination Committee Completed Written and Oral Field of Study Examinations Acquired Human Ethics Approval for Fieldwork Storytelling & Group Sharing Circles
May-August 2022 Vanier Funding Year 2	Primary Fieldwork 2: WRF, HBTA, GFL, Regenera Ranch, Winter's Turkeys Community-Building with Agrarian Network
Sept 2022-April 2023	Sessional Instruction with Key Community Counterparts as Guiding Elders Storytelling & Group Sharing Circles Made Meaning of Knowledge Gathered & Began Dissertation Co-Presented Preliminary Findings with Key Community Counterparts
May-August 2023 Vanier Funding Year 3	Sessional Instruction with Key Community Counterparts as Guest Speakers Primary Fieldwork 3: WRF, HBTA, GFL, Regenera Ranch Cycles of Dissertation Review with Community
Sept 2023-April 2025 (1 year parental leave)	Sessional Instruction with Key Community Counterparts as Guest Speakers Completed Written Dissertation & Defend to Committee Shared Results with Community Continued Agrarian Work Indefinitely

Appendix D: Protocol for Experiential Research

1. Prior informed, explicit written or oral consent will be received from community members wishing to participate in farming activities or tours. Similarly, the participants will have noted their preferences for the activity [not] being audio-taped prior to the start of the activity. They will also have expressed their consent for photographs to be taken of them during the activity.

2. Participants will be reminded throughout data collection of their rights to stop the activity at any time, alter the original direction or intention of the activity, or withdraw from the study entirely.

3. Participants will have the full authority to decide in which activity(ies) they will engage the researcher.

4. A day, time and location that best suits the participants will be arranged for farming and tours to occur.

5. Prior to the activity (i.e. planting, weeding, harvesting, etc., farm tour, learning walk.), the researcher will share what the general objectives, intended observations, and questions will be.

6. The researcher and participants will begin engaging in the indicated activity for the duration of time approved by the participants. These activities should occur in public spaces where other people are present.

7. The researcher and participants will review all field notes and/or audio-tapes together to ensure accurate data collection and representation.

8. If the activity has ended but the researcher needs further clarifications or still has inquiries, participants can choose to address them at that moment or schedule another day and time that best suits their schedule.

9. Participants will be reminded that they can withdraw their collected data within 90 days of the official end date of the fieldwork.

10. If possible, follow-up farming activities and tours will occur following the exact same protocol.

Appendix E: Monthly Experiential Research Activities

Month	EXL Research Activity	Location
January	- Duck Cull & Farm Exchange - Make Crop Plans & Acquire Seeds - Storytelling & Sharing Circles - Drink Gathered Teas	HBTA, WRF GFL, WRF, RRUF GFL WRF
February	- Cut Willow & Weave Baskets - Storytelling & Sharing Circles - Make Tallow Soap & Candles - Gather Poplar Buds	WRF, Goodnote GFL WRF WRF
March	- 1st Batch of Chicks (laying) - Build & Repair Coops - Shear Sheep & Farm Exchange - Tan Hides - Start Indoor Seedlings - Storytelling & Sharing Circles	HBTA HBTA Regenera Ranch, GFL WRF GFL, WRF, RRUF HBTA, Regenera, Winter's Turkeys
April	- Lambing & Farm Exchange - Birds on Pasture - 1st Batch of Chicks (meat)	Regenera Ranch, GFL HBTA HBTA
May	- Raise Greenhouse - Bed Prep & Direct Seed - Maintain Pasture Flocks - Gather Morels, Wild Asparagus & Walking Onions	RRUF GFL, WRF, RRUF HBTA, Regenera WRF
June	- 2nd Batch of Chicks (meat) - Plant & Early Harvests - Mulch Haskaps - First Market Stands - Maintain Pasture Flocks - Gather Spruce Tips, Raspberry Leaf, Labrador Tea & Wild Mint	HBTA GFL, WRF, RRUF WRF RRUF HBTA, Regenera, WRF WRF
July	- Plant & Harvest - Harvest Haskaps - Market Stands - Maintain Pasture Flocks - Plant Trees & Farm Exchange - Gather Saskatoons, Red Clover Flowers, Bergamot, Wild Strawberries	GFL, WRF, RRUF WRF RRUF HBTA, Regenra, WRF Regenera, GFL GFL, WRF
August	- Final Plant & Harvest - Market Stands - Maintain Pasture Flocks - Gather Chokecherries - Extract Honey	GFL, WRF, RRUF RRUF HBTA, Regenera, WRF GFL WRF
September	- Final Harvest & Put Farm to Bed - Final Market Stands	GFL, WRF, RRUF RRUF

	- Maintain Pasture Flocks - Beef Harvest - Lamb Harvest - Gather Rose Hips & Hiriciums	HBTA, Regenera WRF w/WQF Regenera WRF
October	- Tag Yaks & Farm Exchange - Tan Hides - 1st Load of Turkeys & Farm Exchange - Old Layer Cull & Farm Exchange - Plant Garlic - Winterize Bees - Pick Apples	AB Yak Co., WRF, HBTA WRF Winter's Turkeys, GFL HBTA, WRF GFL, WRF, RRUF, HBTA WRF Calgary Harvest
November	- Hunt Deer - Brew Mead from Honey & Cider from Apples - Start Indoor Microgreens - Storytelling & Sharing Circles	WRF WRF RRUF GFL
December	- 2nd Load of Turkeys & Farm Exchange - Render Beef Tallow - Storytelling & Sharing Circles	Winter's Turkeys, GFL WRF GFL, RRUF

Appendix F: Storytelling Guide

Theme: Family Farm Dynamics
Guiding topics:
- How the family farm has come to be in Wild Rose Country
- Household demographics: number of people, sexes, ages
- Gendered divisions of labour, management of family finances
- Professions and daily activities
- Household's most common needs
- Roles and responsibilities
- Child care, transportation

Theme: Community Relations
Guiding topics:
- Relationships with neighbours
- What a 'relationality' means to them
- How they solve problems in the community
- Involvement with Community Associations, programs, etc.
- Cultural activities

Theme: Land
Guiding topics:
- How they understand their 'ethnoecological community'
- How they understand their 'connection to the land'
- Spirituality with the land and non-human kin
- Knowledge of colonialism in Turtle Island
- Rent/lease, own, or share land
- Barrier to rent or own
- Rights and access to water, soil, and resources

Theme: Foodways- Consumption
Guiding topics:
- Food security
- Food access
- Affordability of food
- Variety, choice, and culturally-appropriate foods
- Dependence on food banks, social agencies, hampers, free meals, etc.
- Relationships with other local farmers
- Participation in farmers markets, CSAs, direct purchasing
- Hunting, gathering, fishing

Theme: Foodways- Production
Guiding topics:
- How they understand 'regenerating the land'
- If they grow or have grown produce and animals, what kinds and where
- Inputs, machinery
- Family farm, agribusiness or cooperative
- Hired labour, seasonal workers, volunteers, interns, self-exploitation
- Barriers faced, climate change impacts
- Regulations around inspection, access to processing facilities, on-farm slaughter

- Knowledge about regenerative, sustainable, organic, etc. agriculture
- Soil health, biodiversity, water consumption
- Distribution channels, marketing, economic viability, cost analysis
- Credit, subsidies, who policies protect
- The interest of youth in farming
- Mentors, networks of farmers

Theme: Political Education

Guiding topics:

- Capitalist world economy
- Neoliberal economic development model of the 1960s-70s, Structural Adjustment Programs of the 80s
- Bylaws, City of Calgary, Provincial and Federal legislature
- Approaches to Development
- Dependency model of food banks and social agencies with food access programs
- Urbanization, population growth, immigration
- Reform vs radical opposition
- Knowledge-making

Appendix G: Knowledge Dissemination

Date	Co-Presenter(s)	Title	Location
Oct. 6, 2020	Sole Presenter	Engaging in Community-Based Work-Integrated-Learning	Calgary Institute for Humanities Public Pilot Project Info. Session
Oct. 22, 2020	Sole Presenter	Global to Local: Food Systems in YYC	UCalgary Topics in Global Food Politics, Guest Lecture
Nov. 25, 2020	Gertrude Korkor Samar	Food Pedagogy for Transformative Social Change	UCalgary Department of Anthropology and Archaeology, AnArky Talk Series
Jan. 15, 2021	Gertrude Korkor Samar	From Seed to Social Agency	Calgary Institute for the Humanities Food Studies Interdisciplinary Research Group Symposium
Nov. 24, 2021	Sara Rodriguez Huenchullan	Conversations with a Mapuche Elder in Canada: Creating Experiences to Regenerate the Land and Relational Fabric of Society	UCalgary Department of Anthropology and Archaeology, AnArky Talk Series
Jan. 28, 2022	Sara Rodriguez Huenchullan	Conversations with a Mapuche Elder in Canada: Possibilities and Challenges for a Community-Driven Food Network within a Capitalist World Economy	Calgary Institute for the Humanities Food Studies Interdisciplinary Research Group
Feb 24, 2022	Michael Gavin	Root & Regenerate: The Dynamics of Urban-Ag in Calgary	UCalgary GSA Peer Beyond Symposium
April 5, 2022	Sara Rodriguez Huenchullan	Conversations with a Mapuche Elder in Canada: Opportunities and Limitations for Food "Development" and Community Mobilisation	UCalgary Introduction to Development Studies, Guest Lecture
Oct. 6, 2022	Sole Presenter	Relational Foodways: Nurturing Ethnoecological Communities through Regenerative Farming in Wild Rose Country	Calgary Institute for the Humanities
Feb. 11, 2023	Lachlan Wichert	Beans, Beans, the Magical Fruit: Seed Saving in Alberta	UCalgary GSA Peer Beyond Symposium
April 13, 2023	Sole Presenter	Farmerland Who's Who: Phenological Observations on a Small-Scale Regenerative Farm in Alberta's Aspen Parkland	UCalgary Department of Anthropology and Archaeology, Student Research Day
June 11, 2023	Sole Presenter	Relational Foodways: Nurturing	P.E.O. Awards Local Chapter Talk

		Ethnoecological Communities through Regenerative Farming in Wild Rose Country	
Nov. 10, 2023	Sole Presenter	Reflective Weavings of a Knowledge Basket Farming and Re-Searching in Wild Rose Country	McGill University Journal Launch of Collective Research in Anthropology
June 13, 2024	Sole Presenter	Relational Foodways: Nurturing Ethnoecological Communities through Regenerative Farming in Wild Rose Country	UCalgary Introduction to Social and Cultural Anthropology Studies Lecture
Aug. 11, 2024	Sole Presenter	Relational Foodways: Nurturing Ethnoecological Communities through Regenerative Farming in Wild Rose Country	P.E.O. Awards Local Chapter Talk
Nov. 2024	Sole Presenter	Relational Foodways: Nurturing Ethnoecological Communities through Regenerative Farming in Wild Rose Country	American Anthropological Association Annual Meeting
May 7, 2025	Sole Presenter	Relational Foodways in Wild Rose Country: The Pathways, Pitfalls, and Politics of Regenerative Farming in an Agro-Industrial Complex	Canadian Anthropology Society (CASCA) Annual Conference
June 2, 2025	Sole Presenter	Reflective Weavings of a Knowledge Basket Farming and Re-Searching in Wild Rose Country	Canadian Association for Food Studies Assembly, Congress

WITH GRATITUDE